1 Choose the correct answer:

1 The human circulatory system consists of ______ .

a. the heart
b. veins
c. arteries
d. heart and blood vessels

2 Which of the following gases comes from the atmosphere and is absorbed by the leaves to make the plants' food?

a. Carbon dioxide b. Glucose c. Oxygen d. Hydrogen

3 Stomata are pores on the surface of a plant's ______ that allow air to pass through.

a. roots b. leaves c. stem d. flower

4 ______ carry the blood rich in oxygen and nutrients from the heart to all body parts.

a. Veins b. Stems c. Xylems d. Arteries

5 ______ carry the blood rich in carbon dioxide gas back to the heart.

a. Arteries b. Veins c. Lungs d. Xylems

6 Leaves contain ______ that captures the light energy and gives the leaves their green color.

a. a stoma b. chlorophyll c. glucose d. oxygen

7 The photosynthesis process takes place inside the ______ .

a. roots b. stems c. leaves d. flowers

8 Plants use energy from the ______ to produce their food from water and carbon dioxide gas.

a. batteries b. fire c. sunlight d. wind

9 Plants produce ______ as a source of energy to live and grow.

a. flowers
b. carbon dioxide gas
c. seeds
d. glucose (sugar)

10 The .... system moves the blood rich in gases and nutrients through the body.

a. digestive b. circulatory c. respiratory d. nervous

11 Plants use energy from the sunlight to produce their food from water and carbon dioxide gas through a process called ....

a. digestion b. photosynthesis c. evaporation d. breathing

12 Arteries carry the blood rich in .... from the heart to the organs.

a. oxygen b. nutrients c. carbon dioxide d. a and b

13 Plants and humans need .... to survive.

a. water b. air c. soil d. water and air

14 The .... carries water and nutrients from the plant roots to the leaves.

a. xylem b. leaf c. root d. air

15 Which part of the plant plays a similar role to the human circulatory system in order to maintain the survival of the plant?

a. Stem b. Roots

c. Leaves d. Transport system

16 The stem of the vine plant is a/an ....

a. wood stem b. upright stem c. climb stem d. tuber stem

17 The .... support(s) all plant parts and transport water and nutrients to the rest of the plant.

a. roots b. stem c. leaves d. flowers

18 Coconut seeds disperse by ....

a. water b. wind c. humans d. animals

19 Plum seeds disperse by sticking to animals' fur because they ....

a. are light seeds b. have spines

c. are heavy seeds d. float on water

20 .... seeds are light seeds, so they travel by wind.

a. Tomato b. Apple c. Coconut d. Maple

21 Photosynthesis process takes place inside the leaves of plants. What type of gas does a plant release during photosynthesis?

a. Nitrogen gas
b. Hydrogen gas
c. Oxygen gas
d. Carbon dioxide gas

22 The ______ of a plant get water and nutrients from the soil.

a. roots
b. stems
c. leaves
d. flowers

23 The ______ stem extends above the ground.

a. wood
b. upright
c. runners
d. tubers

24 During the photosynthesis process, the plant produces ______ as waste material.

a. carbon dioxide
b. oxygen gas
c. sugar
d. b and c

25 All the following organs are parts of the human circulatory system, except ______ .

a. the heart
b. arteries
c. veins
d. lungs

26 Which part transports food from the leaves to the other parts of the plant?

a. Xylem tissue
b. Small roots
c. Chloroplast
d. Phloem

27 A plant makes its food inside its leaves when the sunlight combines with water and ______ .

a. oxygen gas
b. the roots
c. the stems
d. carbon dioxide

28 Plants use ______ during the photosynthesis process.

a. food
b. oxygen gas
c. carbon dioxide gas
d. glucose

29 The way of seed dispersal depends on the ______ of the seeds.

a. temperature and weather
b. shape and size
c. color and odor
d. all the previous answers

30 A ______ stem is the stem that extends underground.

a. runner
b. tuber
c. climb
d. wood

2 Put (✓) or (✗):

1. The transport system in plants does the same function as the circulatory system in humans. ( )
2. Plants make their own food by respiration. ( )
3. Humans and plants can make their food by the photosynthesis process. ( )
4. The xylem helps the plant get water from the soil. ( )
5. Arteries carry the blood rich in oxygen to all body parts. ( )
6. All plants need soil to grow. ( )
7. The plant's stem has hairs that absorb oxygen gas from the air. ( )
8. A runner is a type of stem which extends underground. ( )
9. Air enters the plant through the roots. ( )
10. A phloem transports food materials from the leaves to other plant parts. ( )
11. Potatos have tuber stems which extend underground. ( )
12. A xylem transports water rich in nutrients from the soil to the leaves. ( )
13. Plants and humans are different in their ways of getting food. ( )
14. Plants produce carbon dioxide and glucose during the photosynthesis process. ( )
15. The method of seed dispersal depends on the shape and size of the seeds. ( )
16. Photosynthesis process takes place in the plant roots. ( )
17. The plant left in the dark has large numbers of green leaves. ( )
18. Sunlight is very important for the plant to survive. ( )
19. Coconut seeds can travel by wind because they are light seeds. ( )
20. Animals fur helps tomato seeds disperse. ( )

3 Correct the underlined words:

1. Chlorophyll in the plant's roots absorbs energy from the sunlight.
2. Potato plants have runner stems.
3. Plants make digestion process to make their own food.
4. Flowers allow gases to move in and out of the plant.
5. Shrubs have climb stems.
6. Stomata are responsible for the absorption of sunlight.
7. Plants take air through tiny holes on the stem called stomata.
8. The stem fixes the plant in the soil.
9. Plants use oxygen gas during the photosynthesis process.
10. Most flowers have climb stems.

4 Write the scientific term:

1. They fix the plant in the soil.
2. They are the reproductive parts of plants.
3. It's a part of the plant where sunlight allows carbon dioxide to combine with water during the photosynthesis process.
4. It's a part of the plant that supports the leaves and other plant parts.
5. It is found in the plant's leaves; it gives them their green color and absorbs energy from the Sun.
6. They're narrow holes spread on the plant's leaves that allow gases to come in and out of the plant.
7. The system that transports blood throughout the human body.
8. A blood vessel that carries the blood rich in carbon dioxide and low in oxygen.
9. Blood vessels carry oxygenated blood from the heart to all body parts.
10. The system that transports water, minerals, and sugars throughout the plant body.
11. They are tubes in the plant that transport food materials from the leaves to all plant parts.

12 The vessels in a plant through which water and nutrients move up from the roots to the leaves.
13 The primary source of energy for all organisms on Earth.
14 The process by which plants make their own food using the energy of sunlight.
15 It is the process of transporting seeds from one place to another.
16 It's the process of producing new plants.
17 It's a gas produced (released) during photosynthesis and is needed for the respiration of living organisms.
18 The gas that the plant needs to make the photosynthesis process.
19 It's a system full of water that contains important minerals for plants to grow.

5 Cross out the odd word:

1 Carbon dioxide gas – Water – Glucose sugar – Sunlight
2 Heart – Roots – Stems – Leaves
3 Green plant – Shelter – Water – Carbon dioxide gas
4 Arteries – Veins – Stem – Blood

6 Give reasons for:

1 Food is very important for humans.
2 Plants' roots have great functions.
3 Sunlight is very important for plants.
4 Plants are important for human life.
5 Chlorophyll is very important for plants.
6 The stem has a great function for plants.
7 Stomata have a great importance for plants.
8 Xylem and phloem are very important for plants.
9 Flowers have a great function for plants.
10 Photosynthesis process is very important for all living organisms.

7 What happens if:

1 A plant is placed in a dark place?

2 Bean seeds are placed on a wet paper towel and other seeds are placed in the soil?

3 Plants have no leaves?

4 Leaves have no chlorophyll?

5 Xylem is removed from the plant structure?

8 Complete the following sentences using the words between the brackets:

1 (xylem - Phloem - stomata - stems)

a. .... transports the glucose from the leaves to other plant parts.

b. Water and nutrients move up the plant's stem through the ....

c. Potatoes have tuber ....

d. The .... on the leaves allow gases to move in and out the plant.

2 (leaves - stem - seeds - roots)

a. The .... supports all plant parts.

b. A flower produces .... for reproduction.

c. The .... fix the plant in the soil.

d. Photosynthesis process is the process of making food inside the .... of the plant.

3 (water - carbon dioxide - nutrients - leaves - Flowers)

a. Gases enter plants through the ....

b. Plant roots absorb .... and .... from the soil.

c. .... are the reproductive parts of many plants.

d. Plants take .... gas from the air to make their food.

4 (Water - green leaves - Green plants - Sun)

a. The .... in a plant are responsible for making its food.

b. .... is a source of energy for the plant to make photosynthesis process.

c. .... are living organisms that can make their own food.

d. .... is a liquid substance that plants, animals and humans need to survive.

5 (carbon dioxide gas - sugar - stomata - water)

a. Without the .... in the leaves of plants, air can't move in or out the plant.

b. The food of a plant is a type of .... which is made in their leaves by photosynthesis process.

c. During photosynthesis process, ... and .... are changed into glucose.

9 Choose from column (A) what suits it in column (B):

A

Column (A)	Column (B)
1 Plants' roots	a. moves glucose from the leaves to other plant parts.
2 Phloem	b. transports water rich in nutrients up to the leaves.
3 Xylem	c. absorb water and nutrients from the soil.

1 .... 2 .... 3 ....

B

Column (A)	Column (B)
1 Chlorophyll	a. are the reproductive parts of the plant.
2 Flowers	b. captures the light energy from the Sun.
3 Roots	c. get water and nutrients from the soil.
	d. move the nutrients from the leaves to all plant parts.

1 .... 2 .... 3 ....

C

Column (A)	Column (B)
1 Potato	a. extends above the ground.
2 Runners stem	b. plant has climb stems.
3 Vine	c. plant has tuber stem.
	d. is the stem of most flowers.

1 .... 2 .... 3 ....

D

Column (A)	Column (B)
1 Tomato seeds	a. disperse by animals' digestive systems
2 Dandelion seeds	b. disperse by floating on water
3 Coconut seeds	c. disperse by wind
	d. disperse by sticking to animals' fur

1 .... 2 .... 3 ....

10 Answer the following questions:

1 Mention two methods of seed dispersal.

2 What are the main parts of a plant?



3 a. This figure represents the .... system.

b. .... carry the blood rich in oxygen.

c. Veins transport blood from the .... to the ....

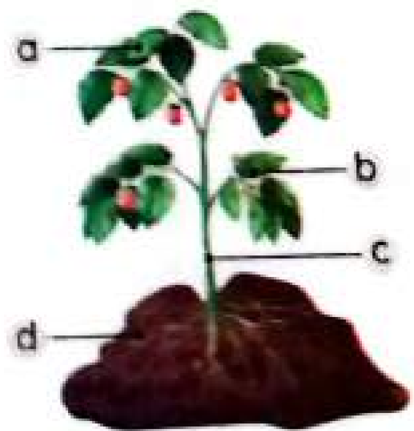
4 Classify the following plants according to the way of dispersal:

(By wind – Sticking to clothes – By water)

		
Plum seeds	Coconut seeds	Dandelion seeds

11 Complete the following sentences using the words between the brackets:

(Root - Leaves - carbon dioxide gas - glucose - water - Flower - Stem - oxygen gas - sunlight)



1 Label the opposite figure:

a. .... b. ....

c. .... d. ....

2 During photosynthesis process, the plant takes ...., ... and .... ; to produce .... and ....

Concept 1.2

Energy Flow in Ecosystems

1 Choose the correct answer:

1. The desert food web starts with the ....
   a. rabbit b. grass c. algae d. insects
2. Food chains include producers, consumers and decomposers. Which of the following is an example of one of these three species?
   a. Grass, rabbit, fungi b. Leaf, eagle, robin
   c. Seed, mouse, owl d. Fly, spider, mantis
3. .... is an area that consists of living organisms and nonliving things.
   a. Ecosystem b. Space c. Sun d. Star
4. A snake is a predator for mice, while a snake is considered prey for ....
   a. rabbits b. frogs c. eagles d. deer
5. Plants are considered .... that get their energy from the Sun.
   a. decomposers b. consumers
   c. producers d. nonliving things
6. The mouse eats grass and seeds, while the owl eats the mouse. This is an example of ....
   a. meat-eating animals b. a food web
   c. plant-eating animals d. a food chain
7. Any food chain starts with ....
   a. producers b. decomposers c. fungi d. consumers
8. Choose the correct order of the food chain: ....
   a. Plant → hawk → snake → mouse
   b. Plant → mouse → hawk → snake
   c. Plant → mouse → snake → hawk
   d. Hawk → snake → mouse → plant
9. Insects are considered .... because they feed on producers.
   a. producers b. primary consumers
   c. decomposers d. secondary consumers

10 Which of the following living organisms is considered a producer?
a. Fungus b. Pine tree c. Snake d. Cow

11 A snake eats a rabbit which eats grass; the snake is a .... in the food chain.
a. primary consumer b. secondary consumer
c. producer d. tertiary consumer

12 Energy flows from one organism to another. Which is the correct direction of the energy flow?
a. From consumers to producers b. From producers to consumers
c. From predators to prey d. From producers to predators

13 .... in food webs are consumers.
a. Plants b. Predators c. Bacteria d. Algae

14 When a squirrel dies in the desert, its body will ....
a. grow b. freeze c. stay d. decompose

15 .... are organisms that eat other living organisms to get their energy.
a. Producers b. Consumers
c. Plants d. Decomposers

16 .... is the process which happens to all dead organisms.
a. Decomposition b. Breathing c. Photosynthesis d. Digestion

17 All the following are consumers, except ....
a. animals b. humans c. birds d. worms

18 All the following are decomposers, except ....
a. grass b. fungi c. millipeds d. bacteria

19 .... is/are consumers.
a. Plants b. Grass c. Humans d. Bacteria

20 .... always benefit the soil.
a. Decomposers b. Consumers c. Rabbits d. Snakes

21 If there are no predators in an ecosystem, the other consumers will ....
a. die b. not be affected c. increase d. decrease

22 What is the scientific term for the complex interactions between producers, consumers, and predators?
a. A suitable environment b. Food chain
c. Food web d. The natural habitat

23 Food webs show ....

a. nonliving things in the environment

b. multiple feeding relationships between living organisms

c. the way heat is retained in the environment

d. substances polluting the atmosphere

2 Put (✓) or (✗):

1 Food webs show how many organisms share food resources within ecosystems. ( )

2 Producers and bacteria are considered examples of consumers. ( )

3 Consumers complete the decomposition process. ( )

4 A food web is made up of two food chains or more. ( )

5 Consumers come after decomposers in the food chain. ( )

6 Decomposers include worms, locusts and fungi. ( )

7 Photosynthesis process is very important for life on Earth. ( )

8 Any food chain starts with a consumer. ( )

9 Energy does not flow between two consumers at the beginning of a food chain. ( )

10 Hawks, crocodiles, and sharks are producers. ( )

11 Seeds and carrots are examples for producers. ( )

12 In an ecosystem that contains only rabbits, mice, snakes, and eagles, if snakes disappear completely, the number of rabbits will increase. ( )

13 The relationship between grass and rabbit is a "prey-predator" relationship. ( )

14 Birds are tertiary consumers because they eat insects that feed on plants. ( )

15 The consumer eaten by another consumer is known as a predator. ( )

16 Dead organisms need energy. ( )

17 Consumers use carbon dioxide gas to make their food. ( )

18 Humans and animals are consumers. ( )

19 The food web will be damaged if the producers die. ( )

20 Producers and decomposers can make their own food. ( )

21 The grass-eating animals are the primary consumers in the food chain. ( )

22 Plants and humans are different in their ways of getting food ( )

3 Complete the following sentences using the words between the brackets:

(Predator - decomposition - Humans - ecosystem - animals - energy - millipedes - producers - Food web - food - Worms - secondary)

1 The .... process restores the energy to the ecosystem.

2 When a hawk eats a snake, this means that the hawk is a ....

3 An .... is an area that provides food, water, and shelter to all living organisms that live there.

4 .... and .... are consumers.

5 Both humans and animals cannot produce their own ....

6 .... is an interaction of a food chain.

7 In any food chain, plants are considered a ....

8 .... and .... are two types of decomposers.

9 In a food chain, the energy flows from a primary consumer to a .... consumer.

10 A food web is a model that describes the .... flow between living organisms in an ecosystem.

4 Write the scientific term:

1 It's a natural process through which the nutrients found in dead organisms' bodies return to the ecosystem.

2 The final link in the food chain.

3 It's a group of living organisms that can produce their own food.

4 They are animals that eat plants.

5 They are consumers that feed on primary consumers.

6 It's a group of living organisms that feed on secondary consumers.

7 It is a model that shows one linear set of feeding relationships and energy flow between living organisms.

8 The animal that is eaten by another animal.

9 It's a community that contains living organisms and nonliving things.

10 It's a group of interconnected food chains.

11 It is the primary source of energy for all living organisms on Earth.

5 Cross out the odd word:

1 Foxes - Lions - Tigers - Frogs

2 Eagle - Hawk - Rabbit - Crocodile

3 Bacteria - Cows - Birds - Snakes

6 Choose from column (A) what suits it in column (B):

A

Column (A)	Column (B)
1 Producers	a. increase soil fertility.
2 Decomposers	b. is made up of several interconnected food chains.
3 Food web	c. is a process in which the nutrients are returned to the ecosystem.
4 Decomposition process	d. get energy from the Sun.

1 .... 2 .... 3 .... 4 ....

B

Column (A)	Column (B)
1 Prey	a. are animals that feed on other animals
2 Secondary consumers	b. are organisms which eat animals that eat plants.
3 Primary consumers	c. are organisms that eat plants.
4 Predators	d. are animals that are hunted by other animals.

1 .... 2 .... 3 .... 4 ....

7 Give reasons for:

1. A rabbit is considered a primary consumer.
2. An ecosystem is very important for the survival of living organisms.
3. A hawk is a meat-eating animal.
4. Hawks depend on plants to get energy.
5. The Sun is considered the main source of energy.
6. Green plants are considered producers.
7. Animals and humans are considered consumers.
8. Decomposers play an important role in the ecosystem.

8 What happens if:

1. All primary consumers disappear from a certain food chain?
2. An organism in an ecosystem disappears?
3. A living organism dies?
4. Producers (grass) are removed from any ecosystem?
5. The number of predators increases in an ecosystem?
6. Decomposers disappear from an ecosystem?

9 Answer the following questions:

1. Arrange the following to form a food chain:



Snake



Fox



Mouse

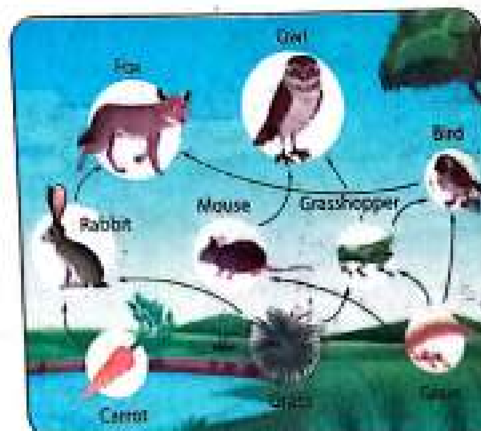


Grass

a. .... b. .... c. .... d. ....

2. a. The opposite figure represents a .... (food chain – food web)

   b. Form a food chain that includes a producer, a primary consumer, and a secondary consumer.



Revision

Concept 1.3
Changes in Food Webs

1 Choose the correct answer:

1 The process that happens to all dead organisms is known as ....
a. respiration
b. photosynthesis
c. digestion
d. decomposition

2 All the following organisms are considered producers, except ....
a. hawks
b. algae
c. green plants
d. marine microorganisms

3 All the following destroy the ecosystem, except ....
a. gentle rain
b. heavy rain
c. drought
d. pollution

4 If the grass is removed from an ecosystem, ... will die first.
a. producers
b. primary consumers
c. secondary consumers
d. decomposers

5 Energy could be recycled back into the ecosystem by the ....
a. predators
b. prey
c. consumers
d. decomposers

6 Corals get harmed when ....
a. water becomes too warm
b. they ingest microplastics
c. fish take them as shelter
d. a and b

7 The food chain describes the process by which .... are transferred among living organisms in an ecosystem.
a. consumers
b. decomposers
c. producers
d. energies

8 If the climate is suitable, the population of a species will ....
a. remain constant
b. become zero
c. decrease
d. increase

9 Which of the following human activities harm marine ecosystems?

a. Overfishing
b. Throwing wastes in water
c. Climate change
d. All the previous answers

10 All the following examples represent human bad activities, except ....

a. overfishing
b. pollution
c. floods
d. cutting trees

11 .... are considered top predators.

a. Tigers
b. Rabbits
c. Frogs
d. a and c

12 Algae in coral reefs provide food for .... directly.

a. primary consumers
b. secondary consumers
c. producers
d. top predators

13 In any food chain, the symbol (→) represents the transfer of ....

a. pollution
b. force
c. energy
d. motion

14 As the result of pollution in an ecosystem, the number of living organisms ....

a. decreases
b. increases
c. doesn't change
d. is doubled

15 .... live on the top of mountain cliffs and feed on small fish.

a. Turtles
b. Corals
c. Algae
d. Seabirds

16 All the following cause habitat loss, except ....

a. adding roads
b. recycling plastic
c. overfishing
d. throwing waste in water

17 The main source of energy on Earth is ....

a. the Sun
b. humans
c. decomposers
d. consumers

2 Complete the following sentences using the words between the brackets:

1 The marine food web starts with .... (algae - parrotfish)

2 Heavy rains may .... the desert ecosystem. (improve - destroy)

3 Rabbits die quickly when .... disappear(s) from the ecosystem. (hawks - grass)

4 Seabirds feed on small fish; they build their nests .... (in water - on the top of mountain cliffs)

5 .... have bad effect on the marine life. (Plastics - Coral reefs)

6 Coral reefs .... the seawater to get their food. (filter - pollute)

7 When coral bleaching happens, corals will .... (die - grow healthy)

8 The water of a lake .... during extreme hot climate. (increases - decreases)

9 Habitat restoration projects .... the ecosystem. (benefit - harm)

10 Pollution harms the ecosystem as the number of living organisms .... (decreases - increases)

11 .... can make their own food. (Fish - Microorganisms)

12 Gentle rain .... the desert ecosystem. (harms - improves)

13 The .... of water temperature causes the migration of microorganisms to other habitats. (increase - decrease)

3 Write the scientific term:

1 They are consumers that exist at the top of food chains.

2 They're living organisms that recycle the energy into the ecosystem.

3 They are consumers that feed on secondary consumers.

4 It's a group of interconnected food chains.

5 It is an area in the ocean where scientists take care of small pieces of corals until they grow up.

6 They're flying living organisms that build their nests on the top of mountain cliffs and feed on small fish.

7 It is the number of organisms of one type of species living in an area.

8 It's the increase or decrease in the number of species of living organisms in an environment.

9 A human activity that affects marine food webs and makes the number of fish decrease.

10 They're small pieces of plastics in the size of rice grains.

11 The process of returning a habitat back to its natural state.

12 They're small organisms that live in cold and are considered producers in the marine food web.

13 When water temperature rises up, the coral reef turns completely into white.

4 Put (✓) or (✗):

1 Corals and sea urchins are examples of top predators in the marine ecosystem. ( )

2 Seabirds feed on small fish to get energy. ( )

3 A healthy marine habitat provides living organisms with food and shelter. ( )

4 People and engineers must help scientists in restoration ecology. ( )

5 When water temperature decreases, coral bleaching happens. ( )

6 If coral reefs are destroyed, many marine food chains will be destroyed. ( )

7 Microorganisms are producers in some marine food chains. ( )

8 Habitat loss may cause extinction of any species of animals. ( )

9 Consumers may migrate if the producers were removed from the ecosystem. ( )

10 A desert food chain doesn't contain any type of fish. ( )

11 If organisms disappear in the ecosystem, this may lead to the destruction of the ecosystem. ( )

12 Top predators are consumers that exist at the top of food chains. ( )

13 Energy transfers from consumers to producers. ( )

14 Heavy rain harms the desert ecosystem. ( )

15 Coral reefs are considered producers. ( )

16 Plastic pollution harms the marine environment. ( )

5 Correct the underlined words:

1 Using wooden forks and cloth grocery bags increase the plastic pollution.

2 Gentle rain causes floods and damages the desert ecosystem.

3 Plastic is healthy and smooth, so it causes harm to the marine living organisms.

4 Human is considered a producer.

5 Algae are producers in the desert ecosystems.

6 Give reasons for:

1 A healthy habitat is very important for all living organisms.

2 Gentle rains create a healthy ecosystem.

3 Microplastics have bad effects on corals.

4 Heavy rains harm the ecosystem.

5 Plastics are so harmful for marine ecosystems.

6 The nursery plays an important role in the recovery of coral reefs.

7 Coral reefs are important for marine organisms and humans.

7 What happens if:

1 The water temperatures rises (concerning coral reefs)?

2 The temperature of water containing microorganisms increases?

3 The number of one species increases a lot (concerning food resources)?

4 The small lakes are exposed to extreme hot climate?

5 The amount of plastics in water rises?

6 The coral reefs are bleached?

7 Seawater becomes warm (concerning microorganisms)?

8 Sunlight falls on the plastic waste in an ocean?

9 Heavy rains fall on the desert?

10 The grass is removed from an ecosystem?

8 Complete the following sentences using the words between the brackets:

1 (flooding - extinction - consumers - decomposers)

a. Fungi and bacteria are two types of ....

b. Habitat loss is one of the main causes of ....

c. In food chains, energy transfers from producers to ....

d. Heavy rain causes .... which destroys the desert ecosystems.

2 (ecosystem - increases - nursery - decreases)

a. When the number of secondary consumers decreases, the number of primary consumers .... and the amount of producers ....

b. An .... is an area that provides food, water, and shelter to all living organisms that live there.

c. A .... is the area in the ocean where the small pieces of corals are nurtured.

3 (producers - Energy - shelter - primary consumers)

a. .... transfers between animals in a food web to help them do their activities and survive.

b. Marine microorganisms are ....

c. Secondary consumers can eat ....

d. Coral reefs provide marine organisms with ....

4 (sea turtles - coral reefs - small fish - microorganisms)

a. Seabirds feed on ______ .

b. Some marine animals cannot differentiate between food and plastic, such as ______ .

c. The ______ are from the most diverse ecosystems.

d. When water becomes warm, ______ will move to cooler water.

5 (energy - pollution - Seabirds - coral bleaching)

a. When water temperatures rises, ______ happens.

b. Throwing plastic waste into a river causes water ______ .

c. When a predator feeds on prey, the predator gets ______ from the prey.

d. ______ dive deep down into the sea to feed on small fish.

6 (Microplastics - cold - Pollution - die - warm)

a. Microorganisms live in ______ water.

b. If the grass was removed from the ecosystem, primary consumers that feed on plants will ______ .

c. ______ is the harm that happens to air, soil, and water due to human bad activities.

d. ______ and ______ water harm the coral reefs.

7 (Sun - floods - Small fish - producers - tertiary consumers)

a. Heavy rain in the desert lead to ______ which harm the ecosystem.

b. ______ feed on microorganisms floating on the surface of the sea.

c. Microorganisms are considered ______ .

d. Microplastics are formed when plastic is broken down by the ______ .

e. Secondary consumers are considered prey for ______ .

9 Choose from column (A) what suits it in column (B):

A

Column (A)	Column (B)
1 Microorganisms	a. means the increase or decrease in the number of one species in any area.
2 Population Change	b. are small plastic pieces that are even smaller than a grain of rice.
3 Microplastics	c. are producers in the marine food web.

1 .... 2 .... 3 ....

B

Column (A)	Column (B)
1 Habitat	a. is one of the main causes of extinction.
2 Nursery	b. is the environment that the living organism lives in.
3 Habitat loss	c. is an area in the ocean where the small pieces of corals are nurtured.

1 .... 2 .... 3 ....

C

Column (A)	Column (B)
1 Overfishing	a. makes the desert ecosystem get better.
2 Gentle rain in the desert	b. leads to floods.
3 Heavy rain in the desert	c. may destroy the marine ecosystem.

1 .... 2 .... 3 ....

D

Column (A)	Column (B)
1 Coral bleaching	a. can make their own food.
2 Seabirds	b. means the coral turns into white.
3 Microorganisms	c. are primary consumers.
4 Clams	d. dive to search for food.

1 .... 2 .... 3 .... 4 ....

10 Answer the following questions:

1 What are the reasons of losing a habitat?

2 Mention one of the human activities that affect the marine environment.

3 Form food chains from the following living organisms:

a. Rabbit – hawk – snake – green plant

b. Parrotfish – algae – shark – coral

c. Sea star – algae – shark – clam

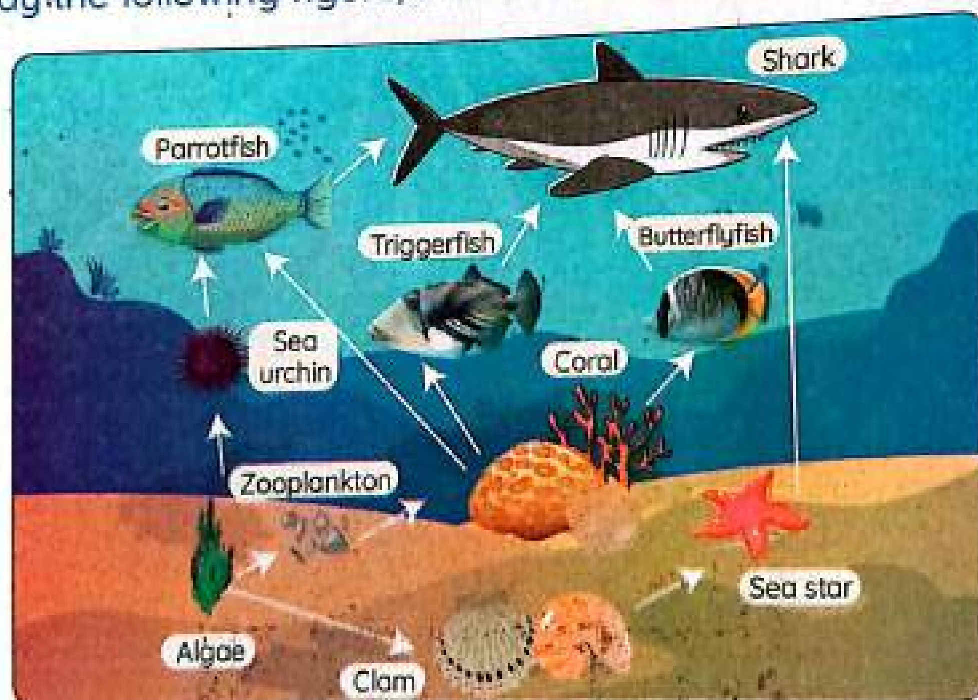
d. Human – grass – chicken

e. Snake – carrot – hawk – rabbit – fungi

f. Duck – grass – fox – bacteria

g. Giraffe – lion – fungi – acacia tree

4 Study the following figure, then answer the questions:



a. This figure represents a .... ecosystem.

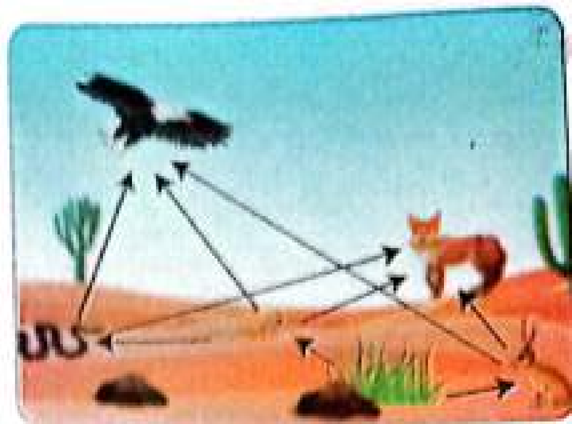
b. .... are considered producers.

c. .... can feed on seaurchins or corals.

d. .... and .... feed on algae.

e. .... is the top predator.

5 Study the opposite figure, then answer the questions:

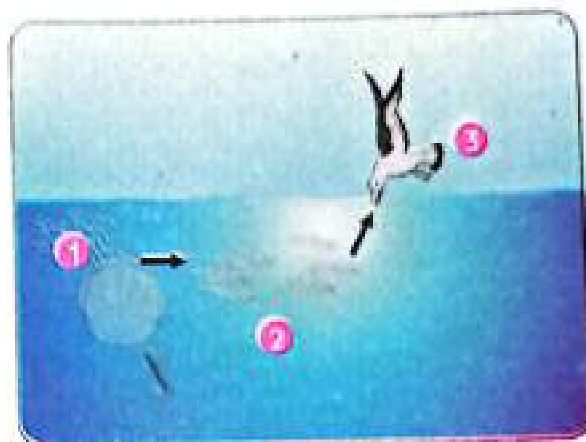


a. This figure represent a ....
(food web - food chain)

b. .... harms this ecosystem.
(Gentle rain - Heavy rain)

c. The .... is considered a top predator. (mouse - eagle)

6 Study the opposite figure, then choose the correct answer:



a. This food chain represents a .... (marine food chain - desert food chain)

b. .... are considered producers of this ecosystem.
(Algae - Microorganisms)

7 Study the following figure, then answer the questions:



a. This figure represents ....

b. It happens when the temperature of water ....

Concept 2.1
Matter in the World Around Us

1 Choose the correct answer:

1 .... is an example of gaseous matter.
a. Oil b. Air c. Wood d. Milk

2 The movement of particles of water is slower than those of ....
a. wood b. glass c. plastic d. oxygen

3 Which of the following matter has no definite volume or shape?
a. Ice b. Water c. Oil d. Oxygen

4 A .... is used to measure the weight of objects.
a. measuring cup b. thermometer
c. meter d. spring scale

5 How are solids unique from other forms of matter?
a. Solids take the shape of any container.
b. Solids have a definite size and shape.
c. Solids can be poured.
d. Solids fill whatever container they are put in.

6 All matter is made of ....
a. molecules b. proteins c. cells d. atoms

7 Matter is ....
a. anything that has mass only
b. anything that has mass and takes up space
c. only water in different states d. only solids

8 Ice is an example of the .... state of water.
a. solid b. gaseous c. liquid d. a & b

9 .... has a definite volume and no definite shape.
a. Air b. Ice c. Water d. Wood

10 We can measure the temperature using a ....
a. thermometer b. scale
c. meter stick d. measuring tape

11 All the following examples represent solid states, except ....

a. oil b. books c. wood d. rocks

12 Water takes the .... of its container.

a. volume b. mass c. color d. shape

13 Which matter has a definite shape and a definite volume?

a. Water b. Ice c. Oil d. Air

14 Particles of .... vibrate around their places.

a. oxygen b. wood c. water d. vinegar

15 All of these substances are gases, except ....

a. water vapor b. oxygen c. air d. stone

16 An example of liquid is ....

a. vinegar b. rock c. pencil d. oxygen

17 Water can be found in a gaseous state in the form of ....

a. ice b. water vapor
c. oxygen d. frozen water

18 The .... matter can be poured in any container.

a. liquid b. gaseous c. solid d. b and c

19 If ice is transferred from a container to another, its volume ....

a. increases b. doesn't change
c. decreases to its half d. doubles

20 Scientists use .... to see the components of one blood cell.

a. regular microscopes b. naked eyes
c. medical glasses d. electron microscopes

2 Write the scientific term:

1 It's the state of water after its freezing.

2 It's anything that has mass and occupies space.

3 It's the state of matter that has a fixed shape and volume.

4 It's the state of matter in which the particles vibrate or move around their places.

5 It's the state of matter that has a definite volume, but no definite shape
6 It's the state of matter that has no definite shape or volume.
7 It's the state of water when its temperature is between 0°C and 100°C
8 It's a state of matter that can be poured in a container and takes its shape.
9 It's the state of matter that keeps its shape and its particles are packed tightly
10 It's the state of matter in which the particles have a lot of energy and move very freely.
11 It's a tool that is used to measure the length of a wall or room.
12 It's a device that is used to measure the weight of an object.
13 They are the building units of matter.
14 It is a measurement of the amount of matter.
15 It's the property of matter which is measured by a measuring cup.
16 It's a process in which ice changes into water.
17 It's a process in which water changes into ice.
18 It is a copy that is similar to the real thing.
19 It's a model of the whole world that is made in the shape of a large bal

3 Put (✓) or (✗):

1 When you blow a balloon, the particles of air move very slowly. ( )
2 Water vapor is the solid state of water. ( )
3 Particles inside matter are in a continuous motion. ( )
4 All states of matter have the same properties. ( )
5 In a gaseous state, the particles can keep their shape. ( )
6 A liquid has a definite shape and volume. ( )
7 Matter can so small that we can't see it, such as germs. ( )
8 Models help us see germs without a microscope. ( )
9 Particles of gas are packed tightly together. ( )
10 Milk takes the shape of the container that it is poured in. ( )
11 All matter are made up of very large particles. ( )

12 Matter has four states. ( )

13 Models are a great way to see things at the right size. ( )

14 A solar system model tells us about planets; which one is the biggest and which one is the closest to Earth. ( )

15 To measure the height, we use scales. ( )

16 Scientists use regular microscopes to see the components of one blood cell. ( )

17 Particles of gold are different from the particles of iron. ( )

18 Solids can be poured and take the shape of their container. ( )

19 The particles of ice move faster than the particles of water. ( )

20 Matter can change from one state to another. ( )

4 Cross out the odd word:

1 Plastic - Iron - Water - Wood

2 Water - Milk - Sand - Oil

3 Sound - Light - Ice

4 Oil - Milk - Wood - Tea

5 Air - Water vapor - Ice - Carbon dioxide gas

6 Water - Air - Light - Wood

5 Give reasons for:

1 Salt is matter.

2 A book has a definite shape and a definite volume.

3 Wood is a solid matter.

4 Oil is considered a liquid.

5 Steam is a gaseous state.

6 Air has no definite shape or volume.

7 Solid particles can keep their shape.

8 The chef puts vegetables in a freezer or refrigerator.

6 What happens if:

1. Ice cubes are exposed to heat (concerning the state and the speed of the particles)?
2. Water boils for a long time?
3. You leave a cup of milk in the freezer?
4. Water is poured into a cup of water?
5. Liquid changes into gas (concerning the speed of the particles)?

7 Complete the following sentences using the words between the brackets:

1 (Volume - gaseous - solid - Matter)

a. ______ is anything that has mass and takes up space.

b. Water vapor is an example for ______ state.

c. The volume and shape don't change in the ______ matter.

d. ______ is the amount of space that the matter takes.

2 (solar system - gaseous - Earth - solid)

a. In ______ state, the particles are packed tightly together.

b. A ______ model shows us all planets.

c. The particles inside a ______ move very freely.

d. A globe is a model of the ______ .

3 (freely - slowly - gaseous - microscopes - measuring tape - Liquid)

a. The particles of the gaseous state move ______ .

b. ______ is a state of matter that can be poured and takes the shape of the container.

c. You can use a ______ to measure the length of a table.

d. In ______ matter, the particles have a lot of energy.

e. Scientists use ______ to see tiny particles.

4 (definite - Volume - no definite - shape)

a. ______ is the amount of space occupied by matter.

b. Gas has ______ volume.

c. Water takes the ______ of its container.

d. Solids have ______ shapes.

5 (Oil - gold - particles - mass - gaseous)

a. Particles of .... are very close to each other.

b. .... is a liquid state of matter.

c. The volume and shape change in the .... state

d. Matter consists of very tiny identical ....

e. Matter is anything that has .... and occupies space.

8 Choose from column (A) what suits it in column (B):

A

Column (A)	Column (B)
1 Gaseous state	a. in which the particles are packed in a neat and ordered arrangement, so that they can keep their shape.
2 Liquid state	b. in which the particles are not held together and move very quickly.
3 Solid state	c. in which the particles are held together more loosely and take the shape of their container.

1 .... 2 .... 3 ....

B

Column (A)	Column (B)
1 Oxygen	a. Solid state
2 Desk	b. Liquid state
3 Juice	c. Gas state

1 .... 2 .... 3 ....

C

Column (A)	Column (B)
1 Matter	a. is a copy that is similar to the real thing.
2 Temperature	b. is anything that has mass and takes up space.
3 Model	c. is one of the properties of matter that is used to measure how hot or cold the matter is.

1 .... 2 .... 3 ....

D

Column (A)
1 Ice
2 Water
3 Water vapor

Column (B)

a. takes the shape of the container, and its particles are not so near.

b. has a fixed shape, and its particles are very near to each other.

c. does not have a fixed shape, takes up all the space of the container and the particles are far from each other.

1 .... 2 .... 3 ....

9 Classify the following:

Oil – Water vapor – Glass - Wood – Nitrogen – Water

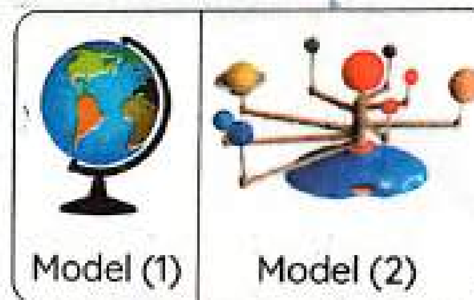
Solid	Liquid	Gas
....	....	....
....	....	....

10 Answer the following questions:

1 a. Which model is the biggest in real? (Model 1 – Model 2)

b. A globe represents a model of ....

c. The Earth is a planet in the .... system.



Model (1) Model (2)

2 Look at the following figure that represents the particles of milk, air and wood:

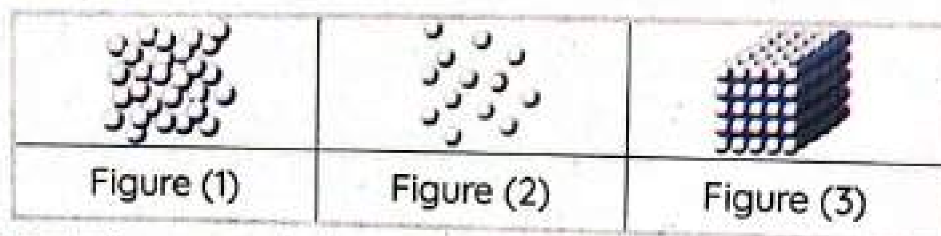


Figure (1) Figure (2) Figure (3)

a. Figure 1 represents the particles of ....

b. Figure 2 represents the particles of ....

c. Figure 3 represents the particles of ....

Concept 2.2

Describing and Measuring Matter

1 Choose the correct answer:

1 Thermometers can be used to measure the ....

a. shape b. color c. temperature d. weight

2 All the following are measuring units of volume, except ....

a. liters b. milliliters
c. cubic centimeters d. kilograms

3 Roofs are used to protect us from ....

a. dust and dirt b. rain water entering inside
c. animals entering inside d. all the previous answers

4 A non-flammable gas that is used to fill balloons is .... gas.

a. hydrogen b. helium c. oxygen d. water vapor

5 A book length or width can be measured using a ....

a. ruler b. thermometer
c. scale d. measuring cup

6 Steel is used in making hammers because it is ....

a. hard b. soft c. waterproof d. transparent

7 The volume of one liter of water has a mass of ....

a. one gram b. one kilogram c. one meter d. one kilometer

8 Tropical rainforest home roofs are made up of ....

a. leaves and sticks b. ceramic bricks
c. strong stones d. sand

9 Copper is used to make ....

a. electric wires b. cooking pots c. windows d. a and b

10 1 kilogram = ... grams

a. 10 b. 100 c. 1 d. 1,000

11 .... is a property of matter which is measured by the tape measure.

a. Mass b. Length c. Volume d. Temperature

12 All the following are from the physical properties of matter, except ....

a. color b. shape c. ability to burn d. temperature

13 Which of the following homes have inclined ceramic bricks roofs?
a. desert homes
b. cold-weather homes
c. tropical rainforest homes
d. desert and tropical rainforest homes

14 Gram is the measuring unit of ....
a. mass
b. length
c. volume
d. temperature

15 Volume is the amount of .... that matter takes up.
a. mass
b. length
c. space
d. temperature

16 A .... is used to measure the mass of objects.
a. ruler
b. measuring tape
c. balance
d. thermometer

17 .... is a property of matter which is measured by the measuring cup.
a. Mass
b. Length
c. Volume
d. Temperature

18 Which of the following are attracted to magnets?
a. A stone
b. An iron nail
c. A piece of wood
d. A piece of cork

19 We use .... to make gloves.
a. glass
b. steel
c. rubber
d. copper

20 .... is a transparent material that is used to make eyeglasses and windows.
a. Glass
b. Steel
c. Rubber
d. Copper

21 We use .... to make the handles of cooking pans.
a. plastic
b. wood
c. copper
d. plastic and wood

2 Write the scientific term:

1 It's the ability of materials to transfer heat and conduct electricity.
2 It's a device that is used to measure the volume of liquids.
3 It is everything around us that has mass and takes up space.
4 They are the properties that can be observed or measured without any change in the matter.
5 It's the property of matter which is measured by a thermometer.
6 They are materials that are used to build the roofs of desert homes.
7 It's a tool that is used to measure the lengths of materials.
8 It is the amount of matter in an object.
9 It is the amount of space that the matter takes up.

10 It's a non-flammable gas that is used to fill balloons and blimps.

11 It's matter that is used to make electric wires and cooking pans.

12 It's a hard and strong matter that is used to make hammers and screwdrivers.

13 It's a transparent and smooth matter that is used to make eyeglasses and windows.

14 It's a flexible waterproof matter that is used to make tires and gloves.

3 Put (✓) or (✗):

1 A measuring cup is used to measure the length of an object. ( )

2 Color, texture, odor, and shape are considered physical properties.( )

3 Glass is used to make tires because it is flexible. ( )

4 Floating and sinking depend on the object's mass. ( )

5 When a wooden cube is placed in a glass of water, it will float. ( )

6 We can observe some physical properties with our five senses. ( )

7 The length of a book can be measured in liters. ( )

8 When the shape of a material changes, its mass isn't affected. ( )

9 We can differentiate between iron and copper by their sight. ( )

10 Helium is a flammable, poisonous gas. ( )

11 Copper can be stretched into a thin, flexible wire. ( )

4 Correct the underlined words:

1 The roof of a desert home is slanted.

2 A thermometer is a tool used to measure the mass of materials.

3 The roof of a cold-weather home is made up of strong stone.

4 A balance is the measuring unit of mass.

5 The roof of a tropical rainforest home is made up of ceramic tiles.

6 A measuring tape is a tool used to measure the volume of materials.

7 Kilogram is a measuring tool of length.

8 A paperclip has a mass of about 1,000 g.

9 One liter of water has a mass of one gram.

10 When particles of matter move quickly, they produce light energy.

11 We use steel to make electric wires because it is a good conductor of electricity.

12 The handles of cooking pans are made up of copper.

5 Give reasons for:

1. It is safe to use helium gas.
2. Balloons that are filled with helium gas rise up in the air.
3. Copper is used to make cooking pots.
4. The roof of a desert home is made of strong stones.
5. The roof of a cold-weather home is inclined and is made of ceramic bricks.
6. The roof of a tropical rainforest home is made of leaves and sticks.
7. Wood and plastic are used in making the handles of cooking pans.
8. Copper is used in making electric wires.

6 What happens if:

1. The roof of a cold-weather home is flat?
2. A piece of paper is burned?
3. A magnet is put close to an iron nail and a plastic spoon?
4. A piece of cork is put in water?
5. An electric wire is made from plastic instead of copper?

7 Choose from column (A) what suits it in column (B):

A

Column (A)	Column (B)
1 Steel	a. is used to make tires.
2 Rubber	b. is used to make cooking pans.
3 Copper	c. is used to make eyeglasses.
4 Glass	d. is used to manufacture screwdrivers.

1 .... 2 .... 3 .... 4 ....

B

Column (A)	Column (B)
1 Balance	a. are from the measuring units of mass.
2 Gram - kilogram	b. are from the measuring units of volume.
3 Measuring cup	c. is a tool that is used to measure volume.
	d. is a tool that is used to measure mass.

1 .... 2 .... 3 ....

C

Column (A)	Column (B)
1 The roof of a desert home	a. is made up of leaves and sticks.
2 The roof of a cold-weather home	b. is made up of ceramic bricks.
3 The roof of a tropical rainforest home	c. is made up of strong stones.

1 .... 2 .... 3 ....

8 Complete the following sentences using the words between the brackets:

(1 gm – physical – chemical – 1 kg – Conduction – flat – inclined)

a. ...... is the ability of the material to transfer heat and conduct electricity.

b. Odor and shape of matter are considered from the .... properties of matter.

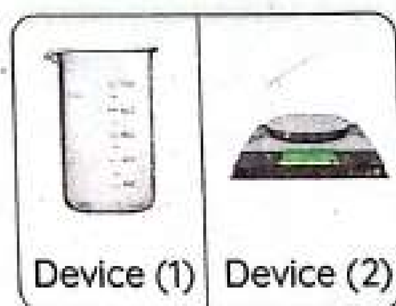
c. The ability of rust is from the .... properties of matter.

d. The roof of a cold-weather home is ...., while the roof of a desert home is ....

e. A paperclip has a mass about ....

9 Answer the following questions:

1 look at the opposite figures, then answer the questions:

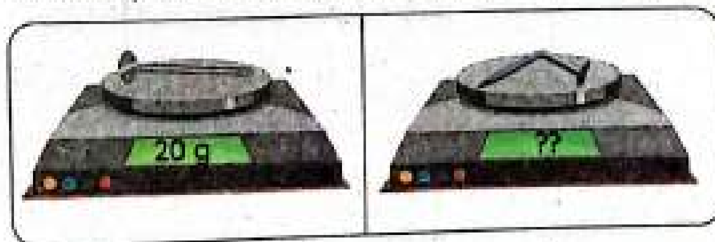


a. Which device is used to measure volume? (Device 1 – Device 2)

b. We can measure the volume by ...., and .... units.

2 We have an iron nail with a mass of 20 grams.

If we change its shape, its mass would be .... grams. (15 – 20 – 35)



3 The mass of a big bottle containing 1 liter of water is ....



Revision

Concept 2.3

Comparing Changes in Matter

1 Choose the correct answer:

1 .... changes describe how one matter reacts with another matter

a. Chemical b. Physical c. Biological d. Break

2 .... changes the matter from a gaseous state to a liquid state.

a. Evaporation b. Boiling c. Condensation d. Freezing

3 .... is considered a chemical change.

a. Cutting vegetables b. Boiling water

c. Baking a cake d. Melting a chocolate

4 All the following are examples for chemical changes of the matter except ....

a. adding baking soda to the batter to bake bread

b. melting iron and reforming it

c. the reaction of water with carbon dioxide inside the leaves

d. burning of a paper

5 .... process is used to separate salt from salt water.

a. Evaporation b. Melting c. Respiration d. Digestion

6 When the water is cooled, its particles ....

a. move slower b. move faster

c. move with the same speed d. do not move

7 We can use .... process to separate sand from sand-water mixture.

a. filtration b. evaporation c. melting d. freezing

8 We can turn ice into water by ....

a. heating b. cooling c. freezing d. rusting

9 By decreasing the temperature of water, it ....

a. condenses b. freezes c. melts d. evaporates

10 Producing ash from the burning of wood is considered a ____ change.

a. chemical b. physical c. freezing d. melting

11 The change of the temperature affects the ____ .

a. shape only b. state only c. color d. a and b

12 All the following are chemical changes, except ____ .

a. digestion of food
b. striking a match
c. adding vinegar to baking soda
d. cutting a cloth

13 On increasing the temperature of water (heating), it ____ .

a. freezes b. melts c. condenses d. evaporates

14 ____ is an example of the physical changes.

a. Iron rust
b. Rotting of fruits
c. Condensation
d. Making bread

15 When the water temperature decreases, water changes into ____ .

a. ice b. water vapor c. steam d. oxygen

16 Which of the following are examples of mixtures?

a. Sand and rock
b. Ocean water
c. Atmosphere
d. All the previous answers

17 When water evaporates, it changes from a ____ state to a ____ state.

a. solid – liquid
b. liquid – gaseous
c. gaseous – liquid
d. liquid – solid

18 The change of matter from a gaseous state to a liquid state is called ____ .

a. evaporation b. condensation c. freezing d. melting

19 The change of matter from a liquid state to a solid state is called ____ .

a. evaporation b. condensation c. freezing d. melting

20 When the temperature of ice increases, its particles ____ .

a. move slower
b. move faster
c. number increases
d. number decreases

2 Put (✓) or (✗):

1. Adding drops of food colors to a cup of water is considered a physical change. ( )
2. Chunks of milk are considered a physical change. ( )
3. Condensation and evaporation are reversible processes. ( )
4. The properties of sugar will change after dissolving it in water. ( )
5. When the temperature increases, ice melts. ( )
6. When a liquid matter gains thermal energy, its particles move faster and change into a gaseous state. ( )
7. Matter changes from one state to another by changing its temperature. ( )
8. The speed of steam particles is greater than that of ice particles. ( )
9. The formation of new substances is considered a chemical change. ( )
10. When we burn a piece of paper, a new substance is formed. ( )
11. Ocean water is a mixture because it consists of water, dissolved salts, and other materials. ( )
12. When we decrease the water temperature, it evaporates. ( )
13. Chemical change is reversible because the substance doesn't change. ( )
14. Freezing is the change of matter from a solid state to a liquid state. ( )
15. The total number of particles in the matter doesn't change by changing the state of the matter. ( )
16. The amount of matter doesn't change when it changes from one state to another. ( )
17. Water droplets are formed on a glass window because of the condensation process. ( )

3 Complete the following sentences using the words between the brackets:

1 (physical - oxygen - burning - chemical - Melting)

a. Baking bread is a .... change, while stretching copper into wires is a .... change.

b. .... of candles is a physical change, while .... of paper is a chemical change.

c. The iron rusts when it reacts with ....

2 (chemical - heat - evaporates - physical)

a. When we .... an ice cream, it melts and becomes liquid.

b. Odor and texture are from the .... properties of matter.

c. Iron rust is from the .... properties of matter.

d. Water .... when it is exposed to a high temperature.

4 Write the scientific term:

1 It is the process of removing salts from seawater.

2 It is a process by which matter is changed from a solid to a liquid state.

3 It is the process by which matter changes from a liquid state to a gaseous state.

4 They are changes in matter which are usually reversible and don't affect its structure.

5 It is a change in matter with a change in its structure producing a new substance.

6 It is the process by which matter changes from a gaseous state to a liquid state.

7 It is a temperature at which matter changes from liquid to solid.

8 It is anything that takes up space and has mass.

9 It's the formation of a flaky reddish layer of iron oxide occurs when iron reacts with oxygen.

10 It is a type of energy we get from the Sun and it's used in warming houses and cooking food.

5 Choose from column (A) what suits it in column (B):

Column (A)	Column (B)
1 Condensation	a. is the change of matter from a solid state to a liquid state.
2 Freezing	b. is the change of matter from a gaseous state to a liquid state.
3 Melting	c. is the change of water from a liquid state to a solid state.
4 Evaporation	d. is the change of water from a liquid state to a gaseous state.

1 .... 2 .... 3 .... 4 ....

6 Give reasons for:

1. Burning of paper is considered a chemical change.
2. The oil takes the shape of the container.
3. We can separate salt from water by heating it for a long time.
4. Melting and freezing are considered physical changes.
5. Ice melts when the temperature increases.
6. Fruit salad and salt water are considered mixtures.
7. The formation of a bad odor when milk is left out of the fridge for several days.
8. Air is considered a mixture.
9. Making bread is considered a chemical change.
10. The formation of a reddish color layer on the surface of a wet iron after a period of time.

7 What happens if:

1. We leave ice out of the freezer?
2. We leave a piece of iron exposed to air for a period of time?
3. We add baking soda to vinegar?
4. We heat salt water for a long time?

8 Correct the underlined words:

1. Freezing water changes it into a liquid state.
2. Burning wood is considered a physical change.
3. A matter changes from a liquid state to a gaseous state by cooling.
4. The particles of matter move slower and become further from each other in the evaporation process.
5. Vegetable salad is considered a compound.
6. Iron is considered a solid, because it has a definite color and shape.
7. If the temperature of water increases, it melts and turns into steam.
8. When a matter is cooled, its particles move faster.

9 Answer the following questions:

1. The opposite figure represents the separation method that is used to separate a mixture of sand and water.



a. Use the following words to label the figure
(Sand – Water – Mixture of sand and water)

b. This separation process is called ....
(evaporation – filtration)

2. Classify the following changes into physical or chemical changes:

a.	b.	c. ....

Concept (1-1)-Plant Needs

-**Plants Basic needs:** Water, air, sunlight and nutrients.

-Soil is not considered as a basic need for the plant (G.R.)? because some plants only grow in the water or grow on other plants instead of having roots in the soil.
-The seeds can grow without soil, if they have water and sun.
-Plants can grow without soil for a while, but finally they need soil.

Photosynthesis process: it is the process through which plants use the energy in sunlight to make their own food

In photosynthesis, carbon dioxide to combine with water to produce:

Oxygen: which is released in air to help living organisms breathe.
Sugar: which gives the plant the energy if needs growth.

-Light is important to plant growth (Basic Need)? (G.R.), because plants use light to make their own food.

Plant Parts	
Plant Part	**Function**
Leaves	- contain chlorophyll which gives them the green color. - make food for the plant through photosynthesis process. - need water, carbon dioxide gas and sunlight to make food.
Stem	-Transports water and nutrients from roots to the rest of plant. Support leave and flowers of the plant.
Root	-Fix the plant in the soil. -Absorb water and nutrients from the soil.

-Plant roots have hair like feature called root hairs (G.R), to increase the amount of absorbed water and nutrients that the plant needs.

-There are many forms of stems:

Wood Stem	Upright	Climb	Tubers	Runners
Tree trunk and shrubs	Flowers	Grabs	Potato plant	Strawberry

-Chlorophyll: absorbs energy from the sunlight to allows carbon dioxide to combine with water to make food for the plant.

Stomata: They are pores on the surface of plant's leaves that allow gasses to move into and out of the plant.

Photosynthesis process

Plant Part	Green Leaves (contains chlorophyll)
Mechanism	-Leaves absorb light energy from the sun. -Stomata allow carbon dioxide to enter leave. -Root absorb water and nutrients from soil. - Xylem carry water and nutrients from root to the leaves. -Phloem carry food materials from leaves to all plant parts.
Reaction	Carbon dioxide combine with water in the presence of light energy.
Products	Oxygen: That animals and human need to breath.
	Sugar: That the plant needs to get energy.

P.O.C	Plants	Human
Get the energy needed	Make their own food through photosynthesis.	Must eat food to get energy: -Digestive system digests food into glucose and nutrients -These nutrients absorbed into the blood.
Get the gases needed	Stomata in the leaves	-The nose and mouth then to lungs. -Oxygen is absorbed and transfer to the blood.

Human Circulatory system

Human Circulatory System		
Heart	-Consist of four chambers two atria and two ventricles. -Pumps blood to all the body parts. -Receives the blood again from body parts.	
Arteries	Carry blood rich in oxygen and nutrients, from the heart to the body cell.	
Veins	-Carry blood rich in carbon dioxide and very small amount of nutrients and oxygen from body cells back to the heart. -Then to the, lung to carry oxygen again.	
Blood capillaries	Tiny blood vessels connect arteries with veins.	

Plant transport system

Plant transport system		
Xylem	Tubes transport water and nutrients upward from roots to the leaves	
Phloem	Tubes transport produced glucose sugar from leaves to all parts of the plant.	

P.O. C	Plant transport system	Human circulatory system
Similarities	-Both have systems of vessels to transport water, nutrients and gases. -Both have one-way vessels.	
Differences	- System of tubes called xylem and.	-System of vessels called veins, arteries and blood capillaries.
	-Xylem carry water and nutrients from the roots to the leaves.	-Arteries carry blood rich in oxygen and nutrients from the heart to all body parts.
	-Phloem carry sugars from leaves to all plant parts.	-Veins carry blood that contain carbon dioxide and is low in nutrients and oxygen from all body parts to the heart.

-During photosynthesis process, light energy (sunlight) converted into chemical energy (glucose).

Flowers: They are the reproductive parts of many plants.

Plant reproduction: It is the process of making new plants.

Ways of seed dispersal in nature		
1-Water	float on water	Coconut seeds
2-Wind	Light seeds	Maple seeds Dandelion seed
3-Animals or human transport	stick to animal fur or human clothes	Burr seeds (have spines)
4-Seeds that are eaten by animals	eaten and come out with the animals' stool in another place.	Tomato seeds Apple seed

Concept (1-2)-Energy Flow in Ecosystem

Ecosystem: It is an area (or community) that contains living organisms and non-living organism's things that interact with each other.
-It provide all living organisms with food, water and shelter.

-How does energy flow through an ecosystem?

Energy flows through an ecosystem from plants to animals, between animals when they eat each other, then when living organisms die, their energy is returned to the soil.



Hawks in ecosystem

-It eat different types of small ground animals.
-Hawks do not eat plants.
-There are few predators that can attack hawks.
-When hawks die, it decomposes and its energy is returned to the soil.
-Animals eat plants or other animals (G.R), because they need energy.

Food is energy

-There is a relation between sunlight and the energy we get from our food (G.R), because the energy we get from food is originally comes from the sun.

Plants	Animals
-Make their own food through photosynthesis process.	-Cannot make their own food. -Get energy from eating other living organisms (plants and animals).

-All living organisms eat food (G.R) to get the energy they need to survive.
-Living organism can be classified into three groups according to their way of feeding.

Producers		
-They are organisms that can make their own food.		
Consumers		
-They are organisms that eat other living organisms to get their needed energy, because they cannot make their own food.		
Primary Consumer	**Secondary Consumer**	**Tertiary Consumer**
Animals eat plants	Animals eat primary consumers	Animals eat secondary consumers
e.g. Insects	e.g. Birds	e.g. Meat eating animals
Decomposers		
-They are organisms that carry out the process of decomposition by breaking down or decaying dead organisms. e.g. Worms and millipedes: eat dead matter and produce waste which is rich in nutrients that increase the soil fertility for plant growth.		

Food chain	Food web
It is a model that shows one linear set of feeding relationships and movement of energy between living organism.	It is a model that shows many different feeding relationships among living organisms.

-First link of food chain is the producer (plant) living organisms.

-Second link of the food chain is the primary consumer living organism.

Prey: any animal that is hunted and eaten by another animal.

Predator: any consumer that hunts and eats another animal.

-It is better to use a food web to show interactions among living organisms than a food chain (G.R.)? because a food web shows interactions among many food chains so, the food web contains many organisms, while a food chain shows interactions between just few organisms.

Dr. Becky Barak



-She is a plant-community ecologist.
-She studied a class in restoration ecology
which means "Rebuilding habitats that are damaged."

Concept (1-3)-Changes in Food Web

-Human activities affect the marine habitats through:

1-Water pollution affects the food webs.

2-Overfishing affects the food webs when humans catch many fish.

-Protection of marine environment in Palau island:

1-Control human activities on land to keep the protected marine environment from pollution by avoiding throwing waste materials into the ocean.

2-Fishermen must not overfish the coral reefs to conserve the marine.

-When and ecosystem changes, food webs change too:

What would happen if ?	Result	Reason
1-If there is a gentle rain in the desert.	the desert ecosystem may be improved	-Because the rainwater will feed plants which will feed living organisms.
2-If there is a heavy rain in the desert.	the desert ecosystem may be harmed	-Because the water of heavy rain will cause flooding which will destroy the ecosystem.
3-If there is a drought and all the grasses died.	the food web in ecosystem maybe destroyed	-Because the plants will die and also the organisms will die.
4-If there are many top predators in the food web.	the other organisms in the food web may be harmed	-Because the top predators will eat all the organisms.

Population: It is the number of organisms of one type of species living in an area

-Any increase or decrease in one species affect the population of other species (G.R.), because all species depend on other species for survival.



Microorganisms:

-Tiny organisms cannot be seen by naked eye.
- Make their own food (producers).
-Live in cold water habitat.

-Seabirds:

-Build their nests on the top of mountain cliffs.
-Feed on small fish found nears surface of the water.

What will happen to microorganisms, if the climate change and water become warmer?

1-Microorganisms will move to an area where the water is cooler.
2-The small fish will also move to a new habitat.
3-Seabirds will move to a new habitat while others will die.

Climate change cause population change	
Suitable change	Unsuitable change
Population increases	Population decreases

-Healthy habitats are important to all organisms in a food web (G.R.), because they provide organisms with resources that they need to survive as: air, food, water and shelter

Habitat Loss

-Coral reefs



1-Provide food and shelter fish and other marine organisms.
2-important for tourism.

-Coral reefs bleaching

When the water is very warm:

1-The coral reefs get rid of the algae living in their tissues.
2- This causes the coral reefs turn completely into white.
3-As a result of coral reefs bleaching, corals often do not survive.



Destroying food web due to coral reefs bleaching causes:

-Fish and other marine organisms may die or move to another habitat.

-People will be negatively affected.

Plastic Pollution

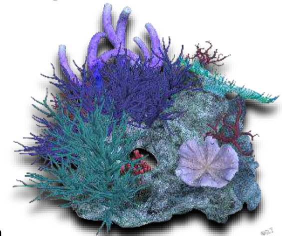
-The effect of plastic products on marine life:

-When the amount of plastic increases in the sea, the number of marine organism's decrease.



How do sea turtles get harmed by feeding on plastic?

-Sea turtle cannot differentiate between jellyfish and a piece of plastic in the water. Therefore, sea turtle eats a lot of plastic thinking that it is a jellyfish, so sea turtle gets harmed.



How do coral reefs get harmed by feeding on plastic?

-When the coral reefs filter the seawater to get their food, they ingest these micro-plastics that are as small as the pieces of food that coral reefs get from the water, so coral reefs get harmed.

Habitat restoration: It is the process of returning a habitat back to its nature before harm was done

The importance of habitat restoration projects:

-Help to prevent species from extinction

-Rebuilding coral reefs through coral reef rehabilitation project.

Nursery: is an area in the sea, where scientists take care of small pieces of coral until they grow up and can be moved back to the reefs where they were dying.

-Protecting coral reefs from plastic pollution through Zero Plastic.

-In Egypt, coastal communities use a new way of life known as Zero Plastic, where people decrease using of one-use plastic products.

Concept (2-1)-Matter in the World Around us

Matter: It is anything that has a mass and takes up space (volume).

States of matter: Solid – Liquid – gas.

Properties of matter include: Color, volume, temperature, shape and hardness.

States of matter

State	Solid	Liquid	Gas
Shape	Definite	Indefinite	Indefinite
Volume	Definite	Definite	Indefinite
Particles	-Very close together -Held together -Cannot slide over each other	-Have more space. -Held together. -Can slide over each other.	-A lot of spaces -Not held together. -Spread out to fill any container.
Energy	Less energy	More energy	A lot of energy
Motion	A little bit	Move more freely	Very freely

Properties of particles of matters:

-They are tiny bodies that we cannot see with our eyes.
-They are (the building unit of matter).
-Different matters have different particles.
-All particles in any state of matter are in continuous motion.

Measuring and observing matter:

Tool	Property	Unit
Length	Ruler or measuring tape	Meter
Mass	Balance	Kg - gm
Temperature	Thermometer	Thermometer
Volume	Measuring Cup	Liter – ml - cm^3

Modeling the particles of matter

-We can use ping pong balls to describe the movement of particles of the three states of matter (G.R.), because they are three dimensional unites and can be separated from each other.

How can we see tiny particles?

-Electron microscope help us to see tine particles e.g. one blood cell.

-Normal microscope helps us to see very small particles.

Models



Model: It is a copy that is similar to a real

-Importance of Models (G.R)?

-Teach something about real things they copy.

-See and understand who things work.

-Learn about many things at just the right size.

-Know what we could not otherwise see.



How models help us look at big things?

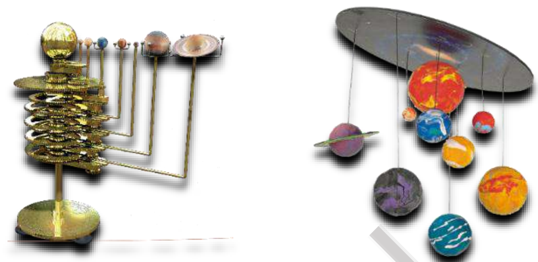
Globe: It is the model of Earth that shows us:

1-Shape of Earth.

2-How much Earth is covered with water.

3-Where different countries located.

The solar system: It is a very big place that consists of sun and many planets.



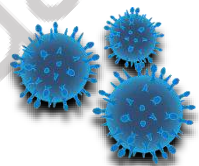
Model of solar system helps us:

1-See all planets at once.

2-Compare between planets.

How do models help us look at small things?

Model of germs help us:



1-See the shape of germ.

2-See different parts of germs.

Models help us understand how things work.

A model of a volcano shows us:



1-Shape of the volcano.

2-How the liquid that comes out of a volcano during eruption.

A model of an airplane shows us how airplane flies up into the air.

Modeling States of Matter

State	Arrangement of particles
Model of solid	Regular pattern (organized)
Model of liquid	Random arrangement (Not well organized)
Model of gas	Random arrangement (Not well organized)

Concept (2-2)-Describing and Measuring Matter

How is matter described and measured?

-Matter can be described by its color, shape, texture or size.

-Matter can described by using its state (solid-liquid-gas).

-Some properties of matter can be measured by using some tools.

A roof for every type of climate

The kind of material used to make a roof depends on the climate where the home is located.

	Material of roof	Properties of roof material
Desert home	Strong Stones	-It is flat. -It protects the home from dust and dirt.
Cold weather home	Ceramic Tiles	-It is inclined. -It protects home from rains.
Tropical rainforest home	Leaves and sticks	-It is inclined. -It protects the home from animals getting inside.

Properties of Matter

Physical Properties



-Can be observed by five senses.

-Such as color, odor, shape and texture.

Chemical Properties

-Can be observed and measured by the changes happen to the material when it interacts with other materials.

1-The ability to burn:



Such as paper interaction with fire forming ash.

2-The ability to rust:



Such as iron interaction with water and air forming rust

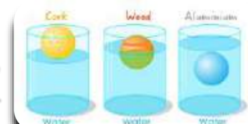
Volume	Mass
The amount of space that the matter takes up.	The measure of the amount of matter.
Measuring unit: -Liters (L) -Milliliters (ml) -Centimeter cubic (cm^3)	Measuring unit: -Gram (g) -Kilogram (kg)
1 L=1000 ml = 1000 cm^3	1 kg = 1000 g
One liter of water has a mass of 1 Kilogram	

Temperature: It is the measure of how quickly the particles in a matter are moving.

-Quickly moving particles produce more heat energy than slower moving particles.



Measuring Property



Attracted or not attracted		Floating or sinking	
Attracted	Not attracted	Floating	Sinking
Iron Nail	Wood – Cork -Stone	Wood - Cork	Iron nail - stone

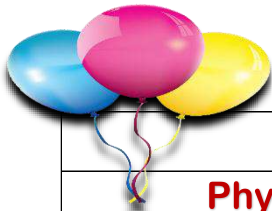
-Floating and sinking of substances does not depend on its mass.
-Ice is lighter than water, so it floats on water surface.

Does the shape and size effect the mass of material?

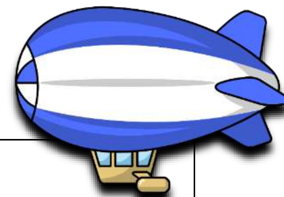
-Changing the shape of matter doesn't affect its mass.

-Changing the size of matter change its mass.

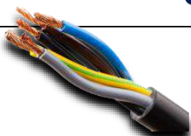




Useful Properties of Matter



Helium	
Physical Properties	**Chemical Properties**
-It is light gas which means that it is lighter than air.	-It is not poisonous. -It is not flammable.
So, it is used to fill balloons.	So, it is used in fill blimps

Copper	
Physical properties	-Can be shaped into thin and flexible wires. -Good conductor of electricity. -Good conductor of heat.
Uses	
-Making electrical wire. 	-Making cooking pans. 

-Electric wires are made of copper (G.R.)?

Because it is a good conductor of heat and can be stretched into thin flexible wires.

-Wood and plastic are used in making handles of cooking pans(G.R.)?

Because they are bad conductors of heat.

Uses of Matter

Matter	Steel	Glass	Rubber
Uses	Screwdrivers-Hammers	Window-light bulb-eyeglasses	Tires-Gloves-Athletic shoes
Property	Strong and hard	Transparent and smooth	Waterproof and flexible

Concept (2-3)-Comparing Changes in Matter

What happened to the mass of a matter when it is heated, cooled or mixed with other substances?

-The mass of any matter does not change when it is heated, cooled or mixed with other matter.

Melting: It is a process in which a matter is changed from a solid state to the liquid state when it temperature increases by heating.

-Light energy is like thermal energy, as when particles of a matter absorb them, particles move, vibrate and spin faster.

Temperature and State of Matter

-The temperature measure how much energy the particles in a substance have.

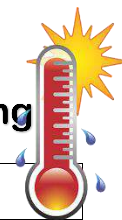
Melting	Freezing
Solid particles gain energy.	Liquid particles lose energy.
Particles move more faster	Particles move slower.
Particles temperature increase.	Particles temperature decreases.
The matter change from solid state to liquid state.	The matter change from liquid state to solid state.

-Melting of ice and freezing of water are examples of physical change.

Physical change: It is a change in matter without any change in its structure.



-Physical changes are usually reversible such as melting and freezing



Water Freezing Point 0° C	Water Boiling Point 100° C
It is the temperature at which water changes from liquid state to solid state.	It is the temperature at which water changes from liquid state to gas state.

Water is found in liquid states between (0°C-100°C)

Freezing and Melting

Freezing: It is the process in which matter changes from liquid state solid.







Melting: It is the process matter the the matter changes from solid to liquid.







P.O.C	Freezing	Melting
Process (Heating or cooling)	By Cooling	By heating
Particle Energy (Gain or lose)	Particles of liquid lose thermal energy.	Particles of solid gain thermal energy
Particle Speed (Faster or slower)	move Slower	move faster
Particle Motion (Separated or get closer)	get closer to each other	separate from each other
State Change	Matter change from liquid state to solid state.	Matter change from solid state to liquid state.
Diagram	Particles of ice / Particles of water / Heating	Particles of ice / Particles of water / Cooling



-Freezing process causes decrease in the speed of particles of matter (G.R), because in freezing process the particles of matter lose thermal energy, so the particles move slower.

-Melting process cause increase in the speed of particle of matter (G.R)

Because in melting process, the particles of matter gain thermal energy, so particles move faster.

Condensation and Evaporation

Condensation: It is the process in Which the matter changes from the gas state to the liquid state.



Evaporation: It is the process in which matter changes from the liquid state to the gas stat.



P.O.C	Condensation	Evaporation
Process (Heating or cooling)	By cooling	By heating
Particle Energy (Gain or lose)	Particle of gas lose thermal energy	Particle of liquid gain thermal energy
Particle Speed (Faster or slower)	Move slower	Move faster
Particle Motion (Separated or get closer)	Get closer together	Separate from each other
State Change	The matter change from gas state to liquid state	The matter changes from liquid state to gas state.
Diagram	Particles of water ← Cooling — Particles of water vapor	Particles of water — Heating → Particles of water vapor

-Water vapor differ from steam:

-Water vapor is invisible.

-When hot water vapor hits cooler air, it condenses into tiny water droplets forming visible steam.



Mixtures



Mixtures and compounds:

Mixtures	Compound
Matter formed of two or more materials	
Materials in the mixture do not combine chemically	Materials in the compound combine chemically.
Mixing does not change its components into new product	Produce new substances.

Mixtures can be made of:

-Solid materials:

e.g. sand and rock mixture. *(components can be seen by eyes)*

-Solid and liquid material e.g. salty water.

Gas materials: e.g. air. *(components cannot be seen by eyes)*

Properties of mixtures:



-It consists of two or more materials.

-Components of mixture do not combine chemically.

-Each material in the mixture keep its properties.

-Components of mixture can be separated after mixing.

Methods to separate component of mixtures

1-Filtration	2-Evaporation
one material in the mixture has smaller particles than the particles of the other materials.	If materials evaporate at different temperatures.
Ex. Separation of a mixture of water and sand.	Ex. Separation of salt from a mixture of salty water.

Mixing it up with Mass

When forming a mixture:	When forming a compound:
The masses of substances before mixing are equal to the masses of these substances after mixing	
properties don't change	properties change.

Evidences Describes Physical Change

Change in shape and size:

Cutting a paper	Cutting a fruit	Coiling a straight piece of wire to form a spring	The flow of sand in an hourglass changes the shape of sand in the container





Expected change in color:

-Adding drops of food color to a cup of water.

-Coloring paper.





Change in state of matter:

-Melting of a piece of chocolate.

-Evaporation of water.





Evidences Describes Chemical Change

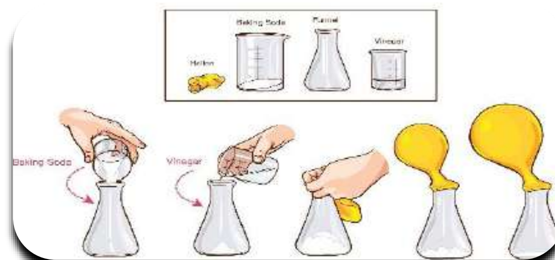
Unexpected color change:

-When mixing iodine with corn starch, a new substance formed and its color is dark blue.



Formation of gas bubbles:

-When mixing baking soda with vinegar, gas bubbles appear.



Formation of strong odor:

-Leaving cup of milk out of the fridge for about two days can produce bad smell.

Physical change Vs Chemical change

Physical change	Chemical change
It is the change in matter without any change in its structure.	It is the change matter with a change in it structure.
Do not produce new substance	Produce new substance.
Change shape, size or state	New substance is different physically and chemically from the original substances.
Reversible	Irreversible
Ex. -Cutting paper into small pieces. -Making Salad. -Melting wax-ice-butter	Ex. -Iron reaction with oxygen and water forming rust. *(iron oxide)* -Oxygen combine with carbon and hydrogen to release heat and start fire. *(change substance to ash)* -Vinegar combine with baking soda, forming gas bubbles. -Digestion of food inside your body (*chemicals produced in your body help in food digestion*)

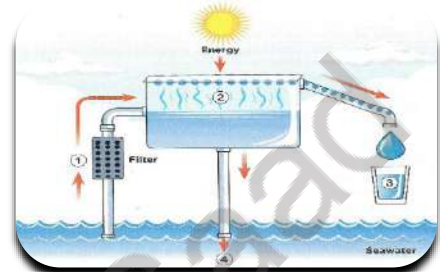
Plenty of water, but none to drink

-Although about 70% of the surface of the Earth is covered by oceans, many people cannot reach fresh water.

-Water of oceans and seas are not suitable for drinking as it is a mixture of water, salt and other minerals.

Desalination: It is the process of removing salt from water.

How do we separate fresh- drinkable water from the mixture of ocean's water?



1-Filtration

- It removes large materials such as seaweeds, shells and fish.

-Water, salts, minerals and gases would pass through filter.

Water still undrinkable

2-Evaporation



-Water vapor rises up leaving salts and other minerals.

-Boiling and filtered water.

Water still undrinkable

3-By cooling the water vapor, it is turned into water.

Water is safe to drink

4-The remainder water that contains large amount of salt is pumped back to the oceans after desalination process.

Problems of desalination



1-Requires a lot of energy.

2-Very expensive process.

3-Lead to environmental problems such as:

-Small marine organisms can be hurt due to sucking of water into the desalination plants.





-The water that contains a very large amount of salts that is pumped back to oceans after desalination, can be dangerous to the marine life.

-Drinking salt water makes the human body dehydrates faster which means that human body loses water faster.

-Egypt has over 80 desalination plants.

(اللهم إني أستودعك ما قرأت وما
حفظت وما تعلمت فرده عند حاجتي إليه
إنك على كل شيء قدير)

G5 Final Revision on unit 1

Choose the correct answer:

1- Both plants and humans need …………. to survive.
a) Shelter b) air c) carbon dioxide gas d) soil

2- Green plants and animals are similar in ……………..
a) size b) structure c) growing d) moving

3- All the following structures exist in green plants, except
a) Stems b) fruits c) blood d) leaves

4- Plants can make their own food through the ………… process.
a) respiration b) digestion c) photosynthesis d) thinking

5- Green plants can absorb nutrients from the …………
a) Water b) soil c) air d) food

6- Without …………., plants can't grow well and will die.
a) Sugar b) soil c) oxygen gas d) sunlight

7- ……………... and …………….. are from the plant needs that help it make photosynthesis.
a) Oxygen - water b) Sunlight - carbon dioxide
c) Water - earth worms d) Nutrients - oxygen

8- Green plants produce all the following substances during photosynthesis process, except ……………..
a) oxygen gas b) carbon dioxide gas c) fat d) glucose

9- The plant placed in a dark room for a week will have…………...
a) green leaves b) long stem c) strong roots d) few leaves

10- Manufacturing of the plant food take place inside the ……of the plant.
a) Stems b) fruits c) roots d) leaves

11- Carbon dioxide gas enters the plant leaf through the ……………
a) Chlorophyll b) stomata c) stem d) xylem

12- Photosynthesis process requires all the following, except ………....
a) water b) sunlight c) oxygen gas d) carbon dioxide

13- ………… absorbs the sunlight during photosynthesis process.

a) Chlorophyll b) stomata c) stem d) xylem

14- The plant produces ……………... through photosynthesis process that gives it the needed energy to grow.

a) oxygen gas b) water c) carbon dioxide gas d) sugar

15- The kind of stems that extend underground are called …………..….

a) climb stem b) tubers c) runners d) wood stems

16- …………….. plant has climb stem.

a) Potato b) Tomato c) Vine d)Pine

17- The human circulatory system includes all the following structures, except the …………....

a) Heart b) Veins c) arteries d)Lungs

18- Food materials (glucose sugar) are transported from the leaves to other parts of the plant through ………………

a) xylem b) phloem c) roots d) stems

19- Blood rich in carbon dioxide gas return back to the heart through …..

a) arteries b) veins c) lungs d) xylem

20- …………… system in plants consists of tubes that water and nutrients move through it.

a) digestive b) Respiratory c)Transport d) Nervous

21- The system in human that moves blood in the human body is called …………….. system.

a) digestive b) Respiratory c)circulatory d) Nervous

22- ……..…. help the plant's leaves to get water and nutrients from the soil.

a) Roots only b) Xylem only

c) Roots and xylem d) Xylem and stomata

23- Plants can produce new seeds by ……………..

a) stem b) leaves c) flowers d) roots

24- The movement of seeds from a place to another is called ………..….

a) seeds germination b) seeds dispersal

c) seeds reproduction d) seeds growth

25- All the following can help in seed dispersal, except ………….

a) wind b) human and animals

c) water d) soil and sunlight

26- From the ways of seed dispersal is floating on water as in ………………

a) tomato seeds b) coconut seeds c) maple seeds d) burr seeds

27- Seeds have spines, so they can ……………..

a) float on water b) travel by wind

c) stick to animal fur d) be eaten by animals

28- Which of the following living organisms can make their own food?

a) animals b) humans c) plants d) all the previous

29- All the following are ecosystems, except …………..

a) desert b) tundra c) rainforest d) space

30- Hawks get their energy by eating ………………...

a) plants only b) animals only

c) nonliving things d) plants and animals

31- Plants are from .... that get their energy from the sun to produce their food.

a) decomposers b) consumers c) producers d) nonliving things

32- Caracals obtain their energy by eating ………………..

a) shark b) grass c) mice d) butterfly

33- All the following living organisms can't make their own food except …...

a) hawk b) pine tree c) mice d) butterfly

34- Fox feed on rabbit, so fox is considered as …………..…

a) producers b) preys c) predators d) decomposers

35- Living organisms that cannot make their own food are …………….

a) producers b) consumers c) decomposers d) b and c

36- All the following are types of food for primary consumers, except ……..

a) grasses b) seeds c) fruits d) eagles

37- Secondary consumers can eat only …………….

a) producers b) primary consumers

c) decomposers d) tertiary consumers

38- Lion is from ……………….

a) producers b) grass eaters c) top predators d) decomposers

39- The predator in a food web usually eats more than one type of ………

a) producers b) consumers c) decomposers d) plants

40- The energy can flow directly from ……………..

a) a Grass to an eagle b) an ant to an eagle

c) a snake to an eagle d) an eagle to a snake

41- ……………… considered as consumer living organisms.

a) Humans b) Plants c) Animals d) a and c

42- All the following from decomposers, except ……………….

a) bacteria b) fungi c) worms d) snake

43- All the following organisms are consumers, except ….

a) deers b) lion c) rabbits d) millipedes

44- The process which happens to all dead organisms is known as ………….

a) photosynthesis b) decomposition c) breathing d) reproduction

45- A hawk depends indirectly on ………..

a) grasses b) snakes c) foxes d) eagles

46- what is the correct order of a food chain?

a) Plant —> Hawk —> Snake —> Mouse.

b) Plant —> Mouse —> Hawk —> Snake.

c) Plant —> Mouse —> Snake —> Hawk.

d) Hawk —> Snake —> Mouse —> Plant.

47- Waste materials produced from millipedes and worms are rich in …….

a) water b) nutrients c) oxygen gas d d) carbon dioxide gas

48- We need more energy during ………………….

a) sleeping b) listening to music c) watching T.V. d) physical exercises

49- If a rabbit dies in the desert, its body will ……………….

a) grow b) stay c) decompose d) freeze

50- Rabbits eat all the following, except ………………..

a) grasses b) carrots c) seeds d) insects

51- If all grasses were removed completely from an ecosystem, rabbits in this ecosystem will ………………

a) increase b) decrease c) die d) not be affected

52- If there are no predators in an ecosystem. the other consumers will…….

a) increase b) decrease c) die d) not be affected

53- If there is no primary consumers in an ecosystem, the producers will…..

a) increase b) decrease c) die d) not be affected

54- All the following factors pollute the water, except ……….………

a) sunlight b) animals wastes c) human wastes d) plastic garbage.

55- If the amount of grasses increases in an ecosystem, this directly increases the number of ………………………

a) caracals b) hawks c) rabbits d) lions.

56- All the following are top predators, except ……….………

a) hawks b) tigers c) butterfly fish d) lions.

57- When there is a gentle rain in a desert ecosystem, this ecosystem may be…………………….

a) harmed b) improved c) destroyed d) collapsed.

58- Ecosystem can be effected by ……………

a) climate changes b) pollution c) human activities d) all the previous

59- The marine food web usually started with …………….

a) clam b) algae c) zooplankton d) parrotfish.

60- On extreme hot climate, the water of a lake …………………..

a) increases due to evaporation. b) decreases due to evaporation.

c) change into ice. d) has a lower temperature.

61- If the climate change is suitable, the population of a species will ………..

a) increases b) decreases c) die d) not change

62- In a food chain, the energy transfer from …………….

a) a predator to a prey b) a prey to a predator

c) a predator to a producer d) a consumer to a producer.

63- Healthy marine environment is important for survival of ……………..

a) humans b) lions c) fish d) deers.

64- All the following are human activities that affect a marine ecosystem, except ……………

a) flooding
b) throwing human wastes
c) overfishing
d) throwing plastic garbage.

65- Which of the following two living organisms don't have direct food relationship between them?

a) Parrotfish and shark
b) Butterfly fish and shark
c) Trigger fish and shark
d) Eagle and shark.

66- Seabirds build their nests ……………………

a) on the water surface
b) on the top of mountain cliffs
c) deep down into the sea
d) deep down into the river.

67- The suitable habitat for microorganisms to survive is ……………....

a) hot water
b) warm water
c) cold water
d) boiled water.

68- All the following may occur due to habitat loss, except ………………..

a) increasing of population
b) decreasing of population
c) extinction of some organisms
d) decreasing of resources.

69- Coral reefs are considered as resources of …………….

a) food only
b) shelter only
c) food and shelter
d) food and pollution.

70- Algae in coral reefs provide food for ………… directly.

a) primary consumers
b) secondary consumers
c) producers
d)top predators

71- When water temperature increases, algae leave tissues of …………….., so they become bleached.

a) Seabirds
b) coral reefs
c) clam
d) sharks

72- As a result of coral reefs bleaching, they will be ………….

a) increased
b) enlarged
c) survived
d) died.

73- Both of sea turtles and …… are present in the same marine food chain.

a) deers
b) jellyfish
c) eagles
d) tigers

74- When coral reefs ……. the seawater, they may ingest microplastics.

a) evaporate
b) filter
c) cool
d) warm

75- All the following processes show coral reefs in healthy conditions, except

a) growing b) bleaching c) reproducing d) filtration

76- Habitat restoration projects allow scientists to ……….. that occur to an ecosystem.

a) increase harms b) decrease harms

c) keep harms d) increase damages

77- The place in which we can take care of small pieces of coral until they grow up is located in …………..

a) seas b) air c) deserts d) forests.

78- To reduce pollution, we have to replace white plastic forks with …….

a) wooden forks b) black plastic forks

c) yellow plastic forks d) green plastic forks.

79- "Zero plastics" project that is applied in Egyptian coastal communities, means that the using of plastic products decreases by …………………

a) 0% b) 10% c) 90% d) 100%

Complete the following sentences:

1- Different plants have three main common structures which are ………….., stem, and …………...

2- Plant food is a kind of sugar called ………….. that provides it with the ………….. needed for growth.

3- Humans and other animals need to eat to get …………...

4- Plants need ………….. gas and they produce ………….. gas through the photosynthesis process.

5- The stem carries water and nutrients from the ………….. to the ………….. of the plant.

6- Soil is the source of ………….. and ………….. which the plant need to make its own food.

7- Some plants can grow without …………...

8- Transport system in the plant consists of two types of vessels which are ………….. and …………...

9- Water and nutrients move up the plant's stem through vessels known as …………...

10- ………….. transports food from the leaves to all plant parts.

11- Human circulatory system consists of …………..and …………...

12- Heart in human circulatory system consists of ………….. chambers which are two ………….. and two …………...

13- There are three types of blood vessels in the human circulatory system which are ………….., ………….. and blood capillaries.

14- Inside the <u>leaves</u> of the plant, sunlight allows ………….. to combine with ………….. during photosynthesis process.

15- Apple trees have ………….. stem.

16- Shrubs have ………….. stems, while most flowers have ………….. stems.

17- Pine tree has ………….. leaves look like …………...

18- Animals and humans need ………….. gas to breathe.

19- In plant's leaves, light energy from the ………….. is converted into ………….. energy during photosynthesis.

20- ………….. is the primary source of energy for all living organisms on the Earth.

21- Human and animals get energy from …………...

22- Nearly all of the producers on the Earth are …………...

23- ………….. consumers are animals that eat plants.

24- ………….. shows interactions between many living organisms.

25- Humans and other animals need to eat to get …………...

26- Producers get energy from the ………….. to produce their own …………

27- Consumer can eat ………….. or may eat another consumer.

28- Any food chain starts with ………….. and ends with …………...

29- Living organisms include producers, ………….. and …………...

30- The interconnected food chains are known as …………...

31- The nutrients that resulted from decomposition and returned to the ecosystem can be used directly by …………...

32- Humans can eat producers and ………….. consumers.

33- The organisms that break down the remains of dead plants and animals into nutrients that return to the ecosystem are called …………..

34- ………….. is the interconnected food chains that show many different feeding relationships.

35- Scientists who work on restoration projects to have healthy habitat for plants to survive are called …………...

36- Throwing plastic garbage and waste materials into a river cause water …………...

37- Heavy rain causes ………….. which destroys desert ecosystems.

38- Seabirds eat ………….. that swim near the water surface.

39- Removing plants in ecosystem negatively impacts ………….. consumers.

40- ………….. are producers that small fish feed on to get energy.

41- When the marine habitats are destroyed, the number of living organisms in their food webs is …………...

42- UV rays coming from the ………….., break down plastic wastes into small pieces called …………...

43- Habitat loss is not only decrease marine population but also it is one of the main causes of …………...

Write the scientific term:

1- The living organisms that can make their own food.

2- The vital process that takes place in green plant to make them survive.

3- A liquid substance that plants, animals and human need to survive.

4- The source of energy that the plant uses to make photosynthesis.

5- A part of the plant that supports its leaves and flowers.

6- The part of the plant that absorbs water and nutrients from the soil.

7- The part of the plant that is responsible for fixing the plant in the soil.

8- Features in the plant's roots that help the plant to get more water and nutrients.

9- The part of the plant that is responsible for making its food.

10- The stems that are extended above and along the ground.

11- Tiny openings in the plants leaves that allow gases to get into and out of the plant.

12- Vessels carry glucose from the plant's leaf to all the plant parts.

13- It pumps the blood to all body parts and receives it again.

14- Vessels that carry the blood rich in oxygen from heart to all body cells.

15- Tiny blood vessels that connect arteries to veins.

16- Parts of the plant responsible for reproduction.

17- The process of producing new plants.

18- A community that contains living organisms and nonliving things.

19- Living organisms that both humans and animals need to survive.

20-The area that provides food, water and shelter to all living organisms which live in it.

21-It is a model that shows one linear set of feeding relationships and energy flow between living organisms.

22- They are consumers which feed on secondary consumers.

23- The animal that is eaten by another animal.

24- The consumer that hunts and eats another animal.

25- A group of living organisms that can live on decaying organisms.

26- Organisms that represent the final link in the food chain.

27- It is a process through which decomposers can recycle nutrients back into the soil.

28- It is the harms that happen to air, water and soil due to human activities.

29- A human activity that leads to decreasing the number of fish and affecting many marine food webs.

30- It transfers between animals in a food web, to help them do their activities and survive.

31- The number of organisms of one type of species lives in an area.

32- Increase or decrease in the number of organisms.

33- They are organisms that are too small for people to see with only their eyes.

34- It is a condition in which coral reefs turn completely into white.

35- A process of returning a habitat back to its natural state before harm was done.

36- It is an area in the sea, where scientists take care of small pieces of coral until they grow up.

Put (√) or (x):

1- Plants, like human and animals, need oxygen gas only. ( )

2- Plants and humans need water and air to live. ( )

3- All plants need soil for growth of the seeds. ( )

4- Plants and animals are similar in the way of getting their food. ( )

5- Many plants need soil for growth the seeds, some don't. ( )

6- All plants have roots, stems and leaves. ( )

7- Each part of the plant has its own function. ( )

8- Plants need water and air only to grow. ( )

9- Stem of the plant absorbs water from the soil. ( )

10- Plant's stem has hairs that absorb oxygen gas from the air. ( )

11- Plants use the energy of the sunlight to make their own food. ( )

12- Photosynthesis process takes place in the plant root. ( )

13- Green plant can grow in a dark room. ( )

14- Roots of plants collect sunlight and carbon dioxide gas from air. ( )

15- Water and carbon dioxide are absorbed by plant's root to help the plant to grow. ( )

16- Light is important for plants growth. ( )

17- A tree trunk is a type of stems called runners. ( )

18- Flowers have a kind of stems called upright stems. ( )

19- At the beginning of germinating some bean seeds, they can grow without soil or sunlight. ( )

20- The plant grows in the soil lower than on the paper towel. ( )

21- Xylems are smaller tubes that connect the stem to the leaf. ( )

22- Chlorophyll is responsible for the green color of the plant. ( )

23- Human circulatory system consists of the heart and the lungs. ( )

24- Arteries are vessels in human circulatory system that carry blood rich in carbon dioxide gas. ( )

25- Oxygen gas enters the human body through the two lungs. ( )

26- Blood moves in the human body in one direction. ( )

27- The reproductive parts of many plants are flowers. ( )

28- Plant's seeds are formed inside the flowers. ( )

29- There is only one way of seeds dispersal in nature. ( )

30- Human could be one of the ways of seed dispersal. ( )

31- There are some activities that don't need energy like listening to music.( )

32- Birds eat insects as a prey to get their energy. ( )

33- There is only one type of ecosystem on the Earth. ( )

34- There is no interaction between the components of an ecosystem. ( )

35-Hawks, crocodiles and sharks are top predators. ( )

36- Producers don't need consumers to survive. ( )

37- In the decomposition process, the role of decomposers comes before the role of scavengers. ( )

38- Hawk can get directly its needed energy by eating beetles. ( )

39- Birds are secondary consumers because they eat insects that feed on plant. ( )

40- Predators of living organisms may be a prey for other living organisms.( )

41- Food web made up of two food chains or more. ( )

42- Dead organisms don't need energy. ( )

43- In a food chain, the energy transfers from eagles to mice. ( )

44- There are some consumers that can eat both plants and animals. ( )

45- Nutrients that present in living organisms bodies returned to the ecosystem after death. ( )

46-The suitable ecosystem for plant community ecologists to do their researches is natural area. ( )

47- Consumers and decomposers can get energy directly from the sun. ( )

48- Recycling of plastic wastes reduces pollution. ( )

49- If there is a heavy rain in a desert ecosystem, it will be harmed. ( )

50- If producers were removed from an ecosystem, the consumers will need to move away. ( )

51- Food webs don't change if their surrounding environments get changed. ( )

52- What is happening on land doesn't affect what is happening in marine ecosystem. ( )

53- A desert food chain doesn't contain any type of fish or sharks. ( )

54- Overfishing is one of the human activities that affect the marine ecosystem. ( )

55- It is better to recycle the waste materials than throwing them in rivers and seas. ( )

56- Zooplanktons can make their own food by photosynthesis process. ( )

57- In a marine food web, there are many top predators like sea star and sea urchin. ( )

58- Healthy habitats provide living organisms with clean air, healthy food, water and shelter. ( )

59- Forest fire negatively affects the marine organisms. ( )

60- Pollution affects both of food resources and animal habitats. ( )

61- The flow of energy in food webs is not affected when the natural habitats are destroyed. ( )

62- Both of jellyfish and sea turtle are consumers. ( )

63- When the temperature of seawater decreases, coral reefs receive more algae. ( )

64- Coral bleaching occurs as a result of throwing plastic in seawater. ( )

65- Living organisms in seas and oceans cannot differentiate between real food and plastic waste materials. ( )

66- Jellyfish can get its energy by eating the sea turtle. ( )

67- If coral reefs are destroyed, many marine food chains will be destroyed. ( )

68-Coral reefs depend on butterfly fish for food and shelter. ( )

69-Coral reefs are considered as a suitable habitat for sharks. ( )

70- It is better to keep natural resources healthy than applying restoration projects. ( )

71- People near the coastal areas must replace cloth bags with plastic one. ( )

Correct the underlined words:

1- Respiration process helps the plant to make its own food.

2- Oxygen gas is absorbed by plants' leaves to make photosynthesis process.

3- When a plant is placed in sunlight, its leaves become pale green.

4- When the plant seed begins to grow and makes sprouts this process is called reproduction.

5- Human can get their food from air and animals.

6- Each of xylem in plants and veins in human are two-ways vessels.

7- Veins carry blood rich in oxygen and nutrients.

8- Human circulatory system consists of the lungs and blood vessels.

9- Many insects are considered as secondary consumers.

10- Decomposers are living organisms that depend on other living organisms in their food.

11- The first link in any food chain is a consumer.

12- It is better for any predator to depend on many species of decomposers to get its energy and survive.

13- The predator is the consumer eaten by another consumer.

14- Sheep feed on grass, so it considered as a tertiary consumers.

15- Decomposers always harm the soil.

16- Recycling nutrients back to the ecosystem is the main function of the consumers.

17- The polluted water has a positive effect on coral reefs.

18- Top predators are decomposers that present at the top of food chains.

19- Due to rising of water temperature, coral reefs turn completely into green.

20- Microorganisms are small pieces of plastics in the size of rice grains and they cause harms to marine organisms.

Choose from column (B) what suits it in column (A)

1)

(A)	(B)
1-Sunlight	a)is absorbed by the roots of the plant.
2- Soil	b) is necessary for plants to survive and grow.
3-Water	c)is not a basic need for plant growth.
4-carbon dioxide	d) a gas which is produced during photosynthesis.
5- Oxygen	e)a gas which is the plant uses during photosynthesis.

1	2	3	4	5
……..	……..	……..	……..	……..

2)

Column A	Column B
1- Chlorophyll	a. Transport nutrients and water to the plant's leaf.
2- Phloem	b. Allowing air to enter the leaf
3- Stomata	c. Absorbing the sunlight of the sun.
4-Xylem	d. Absorb nutrients from the soil.
5-Root hairs	e. Transport food from the plant's leaf

1	2	3	4	5
……..	……..	……..	……..	……..

3)

(A)	(B)
1) Coconut seeds	a) sticking to animal fur.
2) Maple seeds and dandelion seeds	b) floating on water.
3) Burr seeds	c) being eaten by animals.
4) Tomato seeds and apple seeds	d) traveling by wind.

1	2	3	4
……..	……..	……..	……..

Cross out the odd words:

1- Carbon dioxide gas — Water — Oxygen gas — Sunlight.

2- Roots — Stem — Leaves — Sunlight.

3- Green plant — Shelter — Water — Sunlight.

4- Heart – veins – xylem – arteries.

5- Plant – xylem – phloem – blood.

6- Producers – consumers – non-living organisms – decomposers.

7- Sunlight – consumers – glucose – photosynthesis process.

8- Fungi – snakes – millipedes – bacteria.

9- Lion – sharks – tigers – foxes.

10- Rabbit – sheep – bacteria – goat.

11- Eagle – hawk – rabbit – crocodile.

12- Pine tree – grasses – houseflies – apple tree.

13- Clam – sea urchin – zooplankton – algae.

Give reasons for:

1- Photosynthesis process is important for plants to survive.

➢ ………………………………………………………………………………

2- There is no life on Earth in the absence of plants.

➢ ………………………………………………………………………………

3- Roots have important role in photosynthesis process of plants.

➢ ………………………………………………………………………………

4- Stomata are present on plant's leaves.

➢ ………………………………………………………………………………

5- Green plants can make their own food.

➢ ………………………………………………………………………………

6- Chlorophyll in plant's leaves has an important role in photosynthesis process.

➢ ………………………………………………………………………………

7- Circulatory system has an important role for human to survive.

➢ ………………………………………………………………………………

8- Flowers are important parts for the plant.

➢ ………………………………………………………………………………

9- Xylem in plant is a one-way vessel. (Xylem is important in plants)

➢ ………………………………………………………………………………

10- Seeds of maple or dandelion plants can disperse through wind easily.

➢ ………………………………………………………………………………

11- Burdock seed can stick to animal fur.

➢ ………………………………………………………………………………

12- Sunlight is important for all living organisms.

➢ ………………………………………………………………………………

13- Human needs to eat some animals and plants.

➢ ………………………………………………………………………………

14- All the food chains begin with the producers.

➢ ………………………………………………………………………………

15- All the food chains depend on sunlight.

➢ **……………………………………………………………………………….**

16- Consumers depend on producers to get their energy.

➢ **……………………………………………………………………………….**

17- Soil fertility depends on decomposers.

➢ **……………………………………………………………………………….**

18- When the number of one species of consumers in an ecosystem increases, they will die.

➢ **……………………………………………………………………………….**

19- Food webs can be destroyed due to pollution.

➢ **……………………………………………………………………………….**

20- Death of algae may leads to moving sharks away to another place.

➢ **……………………………………………………………………………….**

21- Plastics are very harmful to marine organisms.

➢ **……………………………………………………………………………….**

22- Coral bleaching happens when the water temperature rises.

➢ **……………………………………………………………………………….**

23- Both of rising water temperature and ingesting microplastics are harmful for coral reefs.

➢ **……………………………………………………………………………….**

What happens if.:

1- Plants can't get carbon dioxide gas from air.

➢ ……………………………………………………………………………

2- We put a green plant in a dark room for many days.

➢ ……………………………………………………………………………

3- We put a seed of bean in a wet soil for many days.

➢ ……………………………………………………………………………

4- The plant stops making photosynthesis process for several days.

➢ ……………………………………………………………………………

5- Plants can't produce glucose sugar during photosynthesis process.

➢ ……………………………………………………………………………

6- We remove the flowers of a plant.

➢ ……………………………………………………………………………

7- A hawk is place in an ecosystem contain plants only.

➢ ……………………………………………………………………………

8- There is no sunlight reaches the Earth's surface.

➢ ……………………………………………………………………………

9- All types of decomposers are absent from an ecosystem.
(There is no decomposition process done on the Earth).

➢ ……………………………………………………………………………

10- All primary consumers disappear from a certain food chain.

➢ ……………………………………………………………………………

11- The number of secondary consumers in an ecosystem decreases.

➢ ……………………………………………………………………………

12- The climate change is unsuitable for a population of one type of species.

➢ ……………………………………………………………………………

13- The seawater in which coral reefs live becomes very warm.

➢ ……………………………………………………………………………

Answer the following questions:

1- What are the main parts of plant?

➢ ………………………………………………………………………….

2- What are the basic needs for plant?

➢ ………………………………………………………………………….

3- Mention three ways of seed dispersal.

➢ ………………………………………………………………………….

4- Form a food chain by using the following living organisms :

a) (Lion – Grasses – Deer)

➢ …………….. → …………….. → ……………..

b) (grass – rat – hawk – snake)

➢ …………….. → …………….. → …………….. → ……………..

c) (small fish – seabirds – bacteria – microorganisms)

➢ …………….. → …………….. → …………….. → ……………..

d) (clam – sea star – algae – shark)

➢ …………….. → …………….. → …………….. → ……………..

e) (parrotfish – algae – coral reefs – shark)

➢ …………….. → …………….. → …………….. → ……………..

5- Mention how we can decrease the using of plastic products?

➢ ………………………………………………………………………….

➢ ………………………………………………………………………….

➢ ………………………………………………………………………….

G5 Final Revision on unit 1 (answered)

Choose the correct answer:

1- Both plants and humans need …………. to survive.
a) Shelter b) air c) carbon dioxide gas d) soil

2- Green plants and animals are similar in ……………..
a) size b) structure c) growing d) moving

3- All the following structures exist in green plants, except
a) Stems b) fruits c) blood d) leaves

4- Plants can make their own food through the ………… process.
a) respiration b) digestion c) photosynthesis d) thinking

5- Green plants can absorb nutrients from the …………
a) Water b) soil c) air d) food

6- Without …………., plants can't grow well and will die.
a) Sugar b) soil c) oxygen gas d) sunlight

7- ……………... and ……….….. are from the plant needs that help it make photosynthesis.
a) Oxygen - water
b) Sunlight - carbon dioxide
c) Water - earth worms
d) Nutrients - oxygen

8- Green plants produce all the following substances during photosynthesis process, except ……………..…
a) oxygen gas b) carbon dioxide gas c) fat d) glucose

9- The plant placed in a dark room for a week will have…………...
a) green leaves b) long stem c) strong roots d) few leaves

10- Manufacturing of the plant food take place inside the ……of the plant.
a) Stems b) fruits c) roots d) leaves

11- Carbon dioxide gas enters the plant leaf through the ……………..
a) Chlorophyll b) stomata c) stem d) xylem

12- Photosynthesis process requires all the following, except ………....
a) water b) sunlight c) oxygen gas d) carbon dioxide

13- ………… absorbs the sunlight during photosynthesis process.

a) Chlorophyll b) stomata c) stem d) xylem

14- The plant produces ……………... through photosynthesis process that gives it the needed energy to grow.

a) oxygen gas b) water c) carbon dioxide gas d) sugar

15- The kind of stems that extend underground are called ………….….

a) climb stem b) tubers c) runners d) wood stems

16- …………….. plant has climb stem.

a) Potato b) Tomato c) Vine d)Pine

17- The human circulatory system includes all the following structures, except the …………....

a) Heart b) Veins c) arteries d)Lungs

18- Food materials (glucose sugar) are transported from the leaves to other parts of the plant through ………………

a) xylem b) phloem c) roots d) stems

19- Blood rich in carbon dioxide gas return back to the heart through …..

a) arteries b) veins c) lungs d) xylem

20- …………… system in plants consists of tubes that water and nutrients move through it.

a) digestive b) Respiratory c)Transport d) Nervous

21- The system in human that moves blood in the human body is called ……………. system.

a) digestive b) Respiratory c)circulatory d) Nervous

22- ……..…. help the plant's leaves to get water and nutrients from the soil.

a) Roots only b) Xylem only

c) Roots and xylem d) Xylem and stomata

23- Plants can produce new seeds by ……………..

a) stem b) leaves c) flowers d) roots

24- The movement of seeds from a place to another is called ………….…

a) seeds germination b) seeds dispersal

c) seeds reproduction d) seeds growth

25- All the following can help in seed dispersal, except ………….

a) wind　　b) human and animals
c) water　　d) <u>soil and sunlight</u>

26- From the ways of seed dispersal is floating on water as in ………………

a) tomato seeds　　b) <u>coconut seeds</u>　　c) maple seeds　　d) burr seeds

27- Seeds have spines, so they can ……………..

a) float on water　　b) travel by wind
c) <u>stick to animal fur</u>　　d) be eaten by animals

28- Which of the following living organisms can make their own food?

a) animals　　b) humans　　c) <u>plants</u>　　d) all the previous

29- All the following are ecosystems, except ……………

a) desert　　b) tundra　　c) rainforest　　d) <u>space</u>

30- Hawks get their energy by eating ………………...

a) plants only　　b) <u>animals only</u>
c) nonliving things　　d) plants and animals

31- Plants are from .... that get their energy from the sun to produce their food.

a) decomposers　　b) consumers　　c) <u>producers</u>　　d) nonliving things

32- Caracals obtain their energy by eating ………………..

a) shark　　b) grass　　c) <u>mice</u>　　d) butterfly

33- All the following living organisms can't make their own food except …...

a) hawk　　b) <u>pine tree</u>　　c) mice　　d) butterfly

34- Fox feed on rabbit, so fox is considered as …………..….

a) producers　　b) preys　　c) <u>predators</u>　　d) decomposers

35- Living organisms that cannot make their own food are …………….

a) producers　　b) consumers　　c) decomposers　　d) <u>b and c</u>

36- All the following are types of food for primary consumers, except ……..

a) grasses　　b) seeds　　c) fruits　　d) <u>eagles</u>

37- Secondary consumers can eat only …………….

a) producers　　b) <u>primary consumers</u>
c) decomposers　　d) tertiary consumers

38- Lion is from ………………..

a) producers b) grass eaters c) <u>top predators</u> d) decomposers

39- The predator in a food web usually eats more than one type of ………

a) producers b) <u>consumers</u> c) decomposers d) plants

40- The energy can flow directly from ……………..

a) a Grass to an eagle b) an ant to an eagle

c) <u>a snake to an eagle</u> d) an eagle to a snake

41- ……………… considered as consumer living organisms.

a) Humans b) Plants c) Animals d) <u>a and c</u>

42- All the following from decomposers, except ………………..

a) bacteria b) fungi c) worms d) <u>snake</u>

43- All the following organisms are consumers, except ….

a) deers b) lion c) rabbits d) <u>millipedes</u>

44- The process which happens to all dead organisms is known as ………….

a) photosynthesis b) <u>decomposition</u> c) breathing d) reproduction

45- A hawk depends indirectly on ………..

a) <u>grasses</u> b) snakes c) foxes d) eagles

46- what is the correct order of a food chain?

a) Plant —> Hawk —> Snake —> Mouse.

b) Plant —> Mouse —> Hawk —> Snake.

c) <u>Plant —> Mouse —> Snake —> Hawk</u>.

d) Hawk —> Snake —> Mouse —> Plant.

47- Waste materials produced from millipedes and worms are rich in …….

a) water b) <u>nutrients</u> c) oxygen gas d d) carbon dioxide gas

48- We need more energy during ……………..…….

a) sleeping b) listening to music c) watching T.V. d) <u>physical exercises</u>

49- If a rabbit dies in the desert, its body will ……………….

a) grow b) stay c) <u>decompose</u> d) freeze

50- Rabbits eat all the following, except ……………..……

a) grasses b) carrots c) seeds d) <u>insects</u>

51- If all grasses were removed completely from an ecosystem, rabbits in this ecosystem will ………………

a) increase b) decrease c) die d) not be affected

52- If there are no predators in an ecosystem. the other consumers will…….

a) increase b) decrease c) die d) not be affected

53- If there is no primary consumers in an ecosystem, the producers will…..

a) increase b) decrease c) die d) not be affected

54- All the following factors pollute the water, except ………..………

a) sunlight b) animals wastes c) human wastes d) plastic garbage.

55- If the amount of grasses increases in an ecosystem, this directly increases the number of ………………………

a) caracals b) hawks c) rabbits d) lions.

56- All the following are top predators, except ………..………

a) hawks b) tigers c) butterfly fish d) lions.

57- When there is a gentle rain in a desert ecosystem, this ecosystem may be…………………….

a) harmed b) improved c) destroyed d) collapsed.

58- Ecosystem can be effected by ……………

a) climate changes b) pollution c) human activities d) all the previous

59- The marine food web usually started with …………….

a) clam b) algae c) zooplankton d) parrotfish.

60- On extreme hot climate, the water of a lake …………………..

a) increases due to evaporation. b) decreases due to evaporation.
c) change into ice. d) has a lower temperature.

61- If the climate change is suitable, the population of a species will ………..

a) increases b) decreases c) die d) not change

62- In a food chain, the energy transfer from …………….

a) a predator to a prey b) a prey to a predator
c) a predator to a producer d) a consumer to a producer.

63- Healthy marine environment is important for survival of ……………..

a) humans b) lions c) fish d) deers.

64- All the following are human activities that affect a marine ecosystem, except ……………

a) flooding b) throwing human wastes

c) overfishing d) throwing plastic garbage.

65- Which of the following two living organisms don't have direct food relationship between them?

a) Parrotfish and shark b) Butterfly fish and shark

c) Trigger fish and shark d) Eagle and shark.

66- Seabirds build their nests ……………………

a) on the water surface b) on the top of mountain cliffs

c) deep down into the sea d) deep down into the river.

67- The suitable habitat for microorganisms to survive is ……………....

a) hot water b) warm water c) cold water d) boiled water.

68- All the following may occur due to habitat loss, except ………………..

a) increasing of population b) decreasing of population

c) extinction of some organisms d) decreasing of resources.

69- Coral reefs are considered as resources of …………….

a) food only b) shelter only c) food and shelter d) food and pollution.

70- Algae in coral reefs provide food for ………… directly.

a) primary consumers b) secondary consumers

c) producers d)top predators

71- When water temperature increases, algae leave tissues of …………….., so they become bleached.

a) Seabirds b) coral reefs c) clam d) sharks

72- As a result of coral reefs bleaching, they will be ………….

a) increased b) enlarged c) survived d) died.

73- Both of sea turtles and …… are present in the same marine food chain.

a) deers b) jellyfish c) eagles d) tigers

74- When coral reefs ……. the seawater, they may ingest microplastics.

a) evaporate b) filter c) cool d) warm

75- All the following processes show coral reefs in healthy conditions, except
a) growing b) bleaching c) reproducing d) filtration

76- Habitat restoration projects allow scientists to ……….. that occur to an ecosystem.
a) increase harms b) decrease harms
c) keep harms d) increase damages

77- The place in which we can take care of small pieces of coral until they grow up is located in …………..
a) seas b) air c) deserts d) forests.

78- To reduce pollution, we have to replace white plastic forks with …….
a) wooden forks b) black plastic forks
c) yellow plastic forks d) green plastic forks.

79- "Zero plastics" project that is applied in Egyptian coastal communities, means that the using of plastic products decreases by …………………
a) 0% b) 10% c) 90% d) 100%

Complete the following sentences:

1- Different plants have three main common structures which are roots, stem, and leaves.
2- Plant food is a kind of sugar called glucose that provides it with the energy needed for growth.
3- Humans and other animals need to eat to get energy.
4- Plants need carbon dioxide gas and they produce oxygen gas through the photosynthesis process.
5- The stem carries water and nutrients from the roots to the leaves of the plant.
6- Soil is the source of water and nutrients which the plant need to make its own food.
7- Some plants can grow without soil.
8- Transport system in the plant consists of two types of vessels which are xylem and phloem.

9- **Water and nutrients move up the plant's stem through vessels known as xylem.**
10- **Phloem transports food from the leaves to all plant parts.**
11- **Human circulatory system consists of heart and blood vessels.**
12- **Heart in human circulatory system consists of four chambers which are two atria and two ventricles.**
13- **There are three types of blood vessels in the human circulatory system which are arteries, veins and blood capillaries.**
14- **Inside the leaves of the plant, sunlight allows carbon dioxide to combine with water during photosynthesis process.**
15- **Apple trees have wood stem.**
16- **Shrubs have wood stems, while most flowers have upright stems.**
17- **Pine tree has narrow leaves look like needles.**
18- **Animals and humans need oxygen gas to breathe.**
19- **In plant's leaves, light energy from the sun is converted into chemical energy during photosynthesis.**
20- **Sun is the primary source of energy for all living organisms on the Earth.**
21- **Human and animals get energy from food.**
22- **Nearly all of the producers on the Earth are plants.**
23- **Primary consumers are animals that eat plants.**
24- **Food web shows interactions between many living organisms.**
25- **Humans and other animals need to eat to get energy.**
26- **Producers get energy from the sun to produce their own food.**
27- **Consumer can eat plants or may eat another consumer.**
28- **Any food chain starts with plants (producers) and ends with decomposers.**
29- **Living organisms include producers, consumers and decomposers.**
30- **The interconnected food chains are known as food web.**
31- **The nutrients that resulted from decomposition and returned to the ecosystem can be used directly by plants (producers).**
32- **Humans can eat producers and primary consumers.**
33- **The organisms that break down the remains of dead plants and animals into nutrients that return to the ecosystem are called decomposers.**

34- Food web is the interconnected food chains that show many different feeding relationships.

35- Scientists who work on restoration projects to have healthy habitat for plants to survive are called ecologists.

36- Throwing plastic garbage and waste materials into a river cause water pollution.

37- Heavy rain causes floods which destroys desert ecosystems.

38- Seabirds eat small fish that swim near the water surface.

39- Removing plants in ecosystem negatively impacts primary consumers.

40- Microorganisms are producers that small fish feed on to get energy.

41- When the marine habitats are destroyed, the number of living organisms in their food webs is decreased.

42- UV rays coming from the Sun, break down plastic wastes into small pieces called microplastics.

43- Habitat loss is not only decrease marine population but also it is one of the main causes of extinction.

Write the scientific term:

1- The living organisms that can make their own food. (Green plants)

2- The vital process that takes place in green plant to make them survive. (Photosynthesis process)

3- A liquid substance that plants, animals and human need to survive. (water)

4- The source of energy that the plant uses to make photosynthesis. (Sun)

5- A part of the plant that supports its leaves and flowers. (Stem)

6- The part of the plant that absorbs water and nutrients from the soil. (The root)

7- The part of the plant that is responsible for fixing the plant in the soil. (The root)

8- Features in the plant's roots that help the plant to get more water and nutrients. (Root hairs)

9- The part of the plant that is responsible for making its food. (Green leaves)

10- The stems that are extended above and along the ground. (Runners)

11- Tiny openings in the plants leaves that allow gases to get into and out of the plant. (Stomata)

12- Vessels carry glucose from the plant's leaf to all the plant parts. (Phloem)

13- It pumps the blood to all body parts and receives it again. (Heart)

14- Vessels that carry the blood rich in oxygen from heart to all body cells. (Arteries)

15- Tiny blood vessels that connect arteries to veins. (Blood capillaries)

16- Parts of the plant responsible for reproduction. (Flowers)

17- The process of producing new plants. (Reproduction)

18- A community that contains living organisms and nonliving things. (Ecosystem)

19- Living organisms that both humans and animals need to survive. (Producers or Plants)

20-The area that provides food, water and shelter to all living organisms which live in it. (Ecosystem)

21-It is a model that shows one linear set of feeding relationships and energy flow between living organisms. (Food chains)

22- They are consumers which feed on secondary consumers. (Tertiary consumers)

23- The animal that is eaten by another animal. (Prey)

24- The consumer that hunts and eats another animal. (Predator)

25- A group of living organisms that can live on decaying organisms. (Decomposers)

26- Organisms that represent the final link in the food chain. (Decomposers)

27- It is a process through which decomposers can recycle nutrients back into the soil. (Decomposition process)

28- It is the harms that happen to air, water and soil due to human activities. (Pollution)

29- A human activity that leads to decreasing the number of fish and affecting many marine food webs. (Overfishing)

30- It transfers between animals in a food web, to help them do their activities and survive. (Energy)

31- The number of organisms of one type of species lives in an area. (Population)

32- Increase or decrease in the number of organisms. (Population change)

33- They are organisms that are too small for people to see with only their eyes. (Microorganisms)

34- It is a condition in which coral reefs turn completely into white. (Coral bleaching)

35- A process of returning a habitat back to its natural state before harm was done. (Habitat restoration)

36- It is an area in the sea, where scientists take care of small pieces of coral until they grow up. (Nursery)

Put (√) or (x):

1- Plants, like human and animals, need oxygen gas only. (x)
2- Plants and humans need water and air to live. (√)
3- All plants need soil for growth of the seeds. (x)
4- Plants and animals are similar in the way of getting their food. (x)
5- Many plants need soil for growth the seeds, some don't. (√)
6- All plants have roots, stems and leaves. (√)
7- Each part of the plant has its own function. (√)
8- Plants need water and air only to grow. (x)
9- Stem of the plant absorbs water from the soil. (x)
10- Plant's stem has hairs that absorb oxygen gas from the air. (x)
11- Plants use the energy of the sunlight to make their own food. (√)
12- Photosynthesis process takes place in the plant root. (x)
13- Green plant can grow in a dark room. (x)
14- Roots of plants collect sunlight and carbon dioxide gas from air. (x)
15- Water and carbon dioxide are absorbed by plant's root to help the plant to grow. (x)
16- Light is important for plants growth. (√)
17- A tree trunk is a type of stems called runners. (x)
18- Flowers have a kind of stems called upright stems. (√)

19- At the beginning of germinating some bean seeds, they can grow without soil or sunlight. (x)
20- The plant grows in the soil lower than on the paper towel. (x)
21- Xylems are smaller tubes that connect the stem to the leaf. (√)
22- Chlorophyll is responsible for the green color of the plant. (√)
23- Human circulatory system consists of the heart and the lungs. (x)
24- Arteries are vessels in human circulatory system that carry blood rich in carbon dioxide gas. (x)
25- Oxygen gas enters the human body through the two lungs. (√)
26- Blood moves in the human body in one direction. (√)
27- The reproductive parts of many plants are flowers. (√)
28- Plant's seeds are formed inside the flowers. (√)
29- There is only one way of seeds dispersal in nature. (x)
30- Human could be one of the ways of seed dispersal. (√)
31- There are some activities that don't need energy like listening to music. (x)
32- Birds eat insects as a prey to get their energy. (√)
33- There is only one type of ecosystem on the Earth. (x)
34- There is no interaction between the components of an ecosystem. (x)
35- Hawks, crocodiles and sharks are top predators. (√)
36- Producers don't need consumers to survive. (√)
37- In the decomposition process, the role of decomposers comes before the role of scavengers. (x)
38- Hawk can get directly its needed energy by eating beetles. (x)
39- Birds are secondary consumers because they eat insects that feed on plant. (√)
40- Predators of living organisms may be a prey for other living organisms. (√)
41- Food web made up of two food chains or more. (√)
42- Dead organisms don't need energy. (√)
43- In a food chain, the energy transfers from eagles to mice. (x)
44- There are some consumers that can eat both plants and animals. (√)
45- Nutrients that present in living organisms bodies returned to the ecosystem after death. (√)

46-The suitable ecosystem for plant community ecologists to do their researches is natural area. (√)

47- Consumers and decomposers can get energy directly from the sun. (x)

48- Recycling of plastic wastes reduces pollution. (√)

49- If there is a heavy rain in a desert ecosystem, it will be harmed. (√)

50- If producers were removed from an ecosystem, the consumers will need to move away. (√)

51- Food webs don't change if their surrounding environments get changed. (x)

52- What is happening on land doesn't affect what is happening in marine ecosystem. (x)

53- A desert food chain doesn't contain any type of fish or sharks. (√)

54- Overfishing is one of the human activities that affect the marine ecosystem. (√)

55- It is better to recycle the waste materials than throwing them in rivers and seas. (√)

56- Zooplanktons can make their own food by photosynthesis process. (x)

57- In a marine food web, there are many top predators like sea star and sea urchin. (x)

58- Healthy habitats provide living organisms with clean air, healthy food, water and shelter. (√)

59- Forest fire negatively affects the marine organisms. (x)

60- Pollution affects both of food resources and animal habitats. (√)

61- The flow of energy in food webs is not affected when the natural habitats are destroyed. (x)

62- Both of jellyfish and sea turtle are consumers. (√)

63- When the temperature of seawater decreases, coral reefs receive more algae. (√)

64- Coral bleaching occurs as a result of throwing plastic in seawater. (x)

65- Living organisms in seas and oceans cannot differentiate between real food and plastic waste materials. (√)

66- Jellyfish can get its energy by eating the sea turtle. (x)

67- If coral reefs are destroyed, many marine food chains will be destroyed. (√)

68-Coral reefs depend on butterfly fish for food and shelter. (x)

69-Coral reefs are considered as a suitable habitat for sharks. (x)

70- It is better to keep natural resources healthy than applying restoration projects. (√)

71- People near the coastal areas must replace cloth bags with plastic one. (x)

Correct the underlined words:

1- Respiration process helps the plant to make its own food. (Photosynthesis)

2- Oxygen gas is absorbed by plants' leaves to make photosynthesis process. (Carbon dioxide)

3- When a plant is placed in sunlight, its leaves become pale green. (dark green)

4- When the plant seed begins to grow and makes sprouts this process is called reproduction. (germination)

5- Human can get their food from air and animals. (plants)

6- Each of xylem in plants and veins in human are two-ways vessels. (one-way)

7- Veins carry blood rich in oxygen and nutrients. (Arteries)

8- Human circulatory system consists of the lungs and blood vessels. (heart)

9- Many insects are considered as secondary consumers. (primary)

10-Decomposers are living organisms that depend on other living organisms in their food. (consumer)

11-The first link in any food chain is a consumer. (producer)

12-It is better for any predator to depend on many species of decomposers to get its energy and survive. (consumers)

13-The predator is the consumer eaten by another consumer. (prey)

14-Sheep feed on grass, so it considered as a tertiary consumers. (primary)

15-Decomposers always harm the soil. (benefit)

16- Recycling nutrients back to the ecosystem is the main function of the consumers. (Decomposers)

17- The polluted water has a positive effect on coral reefs. (negative)

18- Top predators are <u>decomposers</u> that present at the top of food chains. (consumer)

19- Due to rising of water temperature, coral reefs turn completely into <u>green</u>. (white)

20- <u>Microorganisms</u> are small pieces of plastics in the size of rice grains and they cause harms to marine organisms. (Microplastics)

Choose from column (B) what suits it in column (A)

1)

(A)	(B)
1-Sunlight	a)is absorbed by the roots of the plant.
2- Soil	b) is necessary for plants to survive and grow.
3-Water	c)is not a basic need for plant growth.
4-carbon dioxide	d) a gas which is produced during photosynthesis.
5- Oxygen	e)a gas which is the plant uses during photosynthesis.

1	2	3	4	5
b	c	a	e	d

2)

Column A	Column B
1- Chlorophyll	a. Transport nutrients and water to the plant's leaf.
2- Phloem	b. Allowing air to enter the leaf
3- Stomata	c. Absorbing the sunlight of the sun.
4-Xylem	d. Absorb nutrients from the soil.
5-Root hairs	e. Transport food from the plant's leaf

1	2	3	4	5
c	e	b	a	d

3)

(A)	(B)
1) Coconut seeds	a) sticking to animal fur.
2) Maple seeds and dandelion seeds	b) floating on water.
3) Burr seeds	c) being eaten by animals.
4) Tomato seeds and apple seeds	d) traveling by wind.

1	2	3	4
b	d	a	c

Cross out the odd words:

1- Carbon dioxide gas — Water — <u>Oxygen gas</u> — Sunlight.

2- Roots — Stem — Leaves — <u>Sunlight</u>.

3- Green plant — <u>Shelter</u> — Water — Sunlight.

4- Heart – veins – <u>xylem</u> – arteries.

5- Plant – xylem – phloem – <u>blood</u>.

6- Producers – consumers – <u>non-living organisms</u> – decomposers.

7- Sunlight – <u>consumers</u> – glucose – photosynthesis process.

8- Fungi – <u>snakes</u> – millipedes – bacteria.

9- Lion – <u>sharks</u> – tigers – foxes.

10- Rabbit – sheep – <u>bacteria</u> – goat.

11- Eagle – hawk – <u>rabbit</u> – crocodile.

12- Pine tree – grasses – <u>houseflies</u> – apple tree.

13- Clam – sea urchin – zooplankton – <u>algae</u>.

Give reasons for:

1- Photosynthesis process is important for plants to survive.
- Because it helps the plants to make their own food.

2- There is no life on Earth in the absence of plants.
- Because plants produce oxygen gas during photosynthesis process which is important for all living organisms to breathe.

3- Roots have important role in photosynthesis process of plants.
- Because the roots help the plant to get water and nutrients from the soil.

4- Stomata are present on plant's leaves.
- To allow air pass through it.

5- Green plants can make their own food.
- Because they can make photosynthesis process.

6- Chlorophyll in plant's leaves has an important role in photosynthesis process.
- Because it absorbs the energy of sunlight that helps the plant to make photosynthesis.

7- Circulatory system has an important role for human to survive.
- Because it transports blood and other fluids throughout the body.

8- Flowers are important parts for the plant.
- Because they produce seeds that help plants to reproduce.

9- Xylem in plant is a one-way vessel. (Xylem is important in plants)
- Because it carry water and nutrients from roots to leaves.

10- Seeds of maple or dandelion plants can disperse through wind easily.
- Because they are light seeds that can fly with wind easily.

11- Burdock seed can stick to animal fur.
- Because they are spiny seeds.

12- Sunlight is important for all living organisms.
- Because plants absorb sunlight to make their own food, then humans and animals eat these plants.

13- Human needs to eat some animals and plants.
- To get energy and to do his activities.

14- All the food chains begin with the producers.

- **Because producers makes their own food by photosynthesis process.**

15- All the food chains depend on sunlight.

- **Because all food chains begin with producers that depend on sunlight to make their own food.**

16- Consumers depend on producers to get their energy.

- **Because consumers cannot make their own food.**

17- Soil fertility depends on decomposers.

- **Because decomposers return nutrients of dead organisms back to the soil.**

18- When the number of one species of consumers in an ecosystem increases, they will die.

- **Because they will not find enough food to eat.**

19- Food webs can be destroyed due to pollution.

- **Because pollution negatively affects all living organisms in food webs.**

20- Death of algae may leads to moving sharks away to another place.

- **Because sharks feed on different fish that feed on algae.**

21- Plastics are very harmful to marine organisms.

- **Because plastics are toxic and sharp.**

22- Coral bleaching happens when the water temperature rises.

- **Because when the water temperature raises the coral reefs get rid of algae from their tissues.**

23- Both of rising water temperature and ingesting microplastics are harmful for coral reefs.

- **Because rising of water temperature cause coral bleaching while microplastics are toxic and sharp.**

What happens if.:

1- Plants can't get carbon dioxide gas from air.
- Plants can’t make their own food during photosynthesis process.

2- We put a green plant in a dark room for many days.
- Plant leaves will be yellow (or pale green).

3- We put a seed of bean in a wet soil for many days.
- It will germinate and grow well.

4- The plant stops making photosynthesis process for several days.
- It can’t make food and will die.

5- Plants can't produce glucose sugar during photosynthesis process.
- Plant can’t get energy to survive and grow.

6- We remove the flowers of a plant.
- Plant can’t produce seeds for reproduction.

7- A hawk is place in an ecosystem contain plants only.
- The hawk moves away to another ecosystem to search for food.

8- There is no sunlight reaches the Earth's surface.
- The plants cannot make their own food by photosynthesis process.

9- All types of decomposers are absent from an ecosystem.
(There is no decomposition process done on the Earth).
- Dead organisms will not be decomposed, and their nutrients will not return back to the soil.

10- All primary consumers disappear from a certain food chain.
- The producers will increase while secondary consumers will move away to another ecosystem to search for food or they will die.

11- The number of secondary consumers in an ecosystem decreases.
- The number of primary consumers increases.

12- The climate change is unsuitable for a population of one type of species.
- The population of this species will decrease.

13- The seawater in which coral reefs live becomes very warm.
- Algae will move away to cooler water and this causes the coral bleaching.

Answer the following questions:

1- What are the main parts of plant?

- **Roots, stem and leaves.**

2- What are the basic needs for plant?

- **Sunlight, water, nutrients and carbon dioxide.**

3- Mention three ways of seed dispersal.

- **Water, wind and living organisms.**

4- Form a food chain by using the following living organisms :

a) (Lion – Grasses – Deer)

- **Grasses → deer → lion**

b) (grass – rat – hawk – snake)

- **Grass → rat → snake → hawk**

c) (small fish – seabirds – bacteria – microorganisms)

- **Microorganisms → small fish → seabirds → bacteria**

d) (clam – sea star – algae – shark)

- **Algae → clam → sea star → shark**

e) (parrotfish – algae – coral reefs – shark)

- **Algae → coral reefs → parrotfish → shark**

5- Mention how we can decrease the using of plastic products?

- **Replace the plastic forks with wooden ones.**
- **Replace the plastic bags with cloth ones.**
- **Recycle the plastic products instead of throwing them in the sea.**

G5 Final Revision unit 2

Choose the correct answer:

1- Water can be found in a solid state in the form of ……………..…
a) ice b) steam c) sea water d) boiling water.

2- An example of a gas is ……………….
a) chocolate b) rock c) pencil d) oxygen

3- Both …………….. and …………….. have the same state of matter.
a) wood – water b) plastic – oil c) wood – milk d) wood – plastic

4- By changing the ……….….. of a matter, its state may change.
a) mass b) volume c) color d) temperature

5- All of these substances are liquids, except ………..
a) Oil b) milk c) stone d) Vinegar

6- Both …… and …….. are solids as they have definite shape and volume.
a) Wood – oxygen b) milk – iron c) wood – iron d) milk – oxygen

7- All the following are liquid matters that used in preparing food, except
a) water b) vinegar c) oil d) rice

8- One of the substances that doesn't take the shape of its container is ……..
a) oil b) coin c) gasoline d) water.

9- The movement of water particles is slower than that of ……………
a) wood b) plastic c) air d) gold.

10- Particles of …………………. vibrate around their place.
a) glass b) air c) oxygen d) water

11- We can use a model to study very large things such as ………...
a) solar system b) germs c) microbes d) viruses.

12- Some liquids come out of a …………. during its eruption.
a) star b) sun c) volcano d) plastic piece

13- All the following can be used to describe matter except ………
a) shape b) price c) color d)texture

14- Which of the following homes have an inclined roof?

a) Desert homes only. b) Tropical rainforest homes only.

c) Desert homes and cold weather homes.

d) Tropical rainforest homes and cold weather homes.

15- Homes which are built in a cold weather area have roofs made up of…..

a) ceramic tiles b) strong stones

c) carton paper d) leaves and sticks.

16- To measure the length of a table, we can use a ………..

a) thermometer b) cylinder c) balance d) measuring tape

17- We can measure the mass of a cube of ice by using a ……….…

a) thermometer b) cylinder c) balance d) ruler

18- We can identify milk by determining its ………...

a) color and texture b) color and size

c) shape and odor d) color and taste

19- All the following properties of matter can be measured by different tools except……………….

a) mass b) volume c) color d) temperature

20- All the following are physical properties of matter except…………

a) color b) rusting c) texture d)shape.

21- Burning of wood is considered as ……………….. of matter.

a) only physical property b) only chemical property

c) both physical and chemical properties

d) neither physical nor chemical properties

22- When the iron interacts with water and air, it ……….

a) becomes ash b) becomes powder c) rusts d) burns.

23- If water is exposed to high temperature, its particles will move ………. and the water may change into …………….

a) faster – ice b) faster – water vapor

c) slower – ice d) slower – water vapor.

24- Which of the following matter is attracted to the magnet?

a) Ice cube b) Iron clip c) Woody spoon d) Plastic ruler.

25- **We can measure the volume of a liquid by all the following units except…………………………..**

a) kilogram b) milliliters c) cubic centimeters d) liters.

26- **The volume of one liter of water has a mass of …………**

a) one gram b) one kilogram

c) one milliliter d) one cubic centimeter.

27- **Which of the following matter floats on the surface of water?**

a) Iron spoon b) Piece of stone c) Iron nail d) Piece of cork.

28- **Which of the following matter sinks and not attracts to the magnet?**

a) Wood cube b) Iron nail c) A stone d) Plastic cup.

29- **If we cut a tomato into 2 halves, so the …………. of one half of tomato will decrease to half.**

a) mass b) shape c) color d) temperature

30- **When you put a lighting match close to helium gas, it will …..**

a) burn b) not burn c) form fire d) Freeze

31- **All the following are from physical properties of copper, except that…………….**

a) it is good conductor of heat. b) it is good conductor of electricity.

c) it can be stretched into thin wires. d) it is lighter than air.

32- **We can use copper to make ………..**

a) handles of cooking pans b) tires

c) body of cooking pans d)gloves

33- **Rubber is used to make all the following, except ………….**

a) athletic shoes b) gloves c) tires d) windows

34- **Ice can turn into water by ………….**

a) cooling b) freezing c) rusting d) heating

35- **All the following happen to the particles of oil when it is cooled, except that they ……………….**

a) move slower b) move faster

c) vibrate less d) come close together

36- When the temperature of water is decreased below 0°C, it will be turned into ………………..

a) water vapor **b) clear water**

c) hot water **d) ice**

37- Physical processes which need heating include …………….

a) melting and freezing **b) melting and condensation**

c) melting and evaporation **d) freezing and evaporation**

38- The two processes which cause particles of matter get close together are ……………………..

a) freezing and condensation **b) freezing and melting**

c) freezing and evaporation **d) melting and condensation**

39- Physical changes of matter include ……………..

a) melting only **b) freezing only**

c) both melting and freezing **d) neither melting nor freezing**

40- From the changes which don't form a new substance is …………..

a) burning of paper **b) cutting of wood**

c) baking bread **d) rusting of iron**

41- Among chemical changes which occurred in cooking is ………

a) cutting vegetables **b) boiling of water**

c) melting of chocolate **d) baking a cake**

42- During burning of wood, ……..…… energies are produced.

a) electrical and light **b) thermal and light**

c) thermal and electrical **d) sound and electrical.**

43- The …..…….. of iodine will not change after mixing it with starch.

a) mass only **b) color only**

c) color and mass **d) properties and mass**

44- Salt can be separated by ……………………… of salty water.

a) filtration **b) evaporation** **c) melting** **d) freezing**

45- To separate sand only from salty water, we can use .... process.

a) filtration **b) evaporation** **c) melting** **d) freezing**

46- **A compound has all the following properties, except that its components………………….**

a) combine chemically b) form new substance

c) change in their shapes

d) do not change chemically or physically

47- **By adding baking soda to vinegar, a ………….. is formed.**

a) Powder b) compound c) mixture d) solid matter

48- **If we mix two equal masses of salt and oil so, their total mass will ……………. after mixing.**

a) equal to zero b) decrease c) increase d) not change

49- **Among mixtures between two liquids is ………….….**

a) vinegar and salt mixture b) orange juice and apple juice

c) salty water mixture d) sand and water mixture

50- **Among chemical unexpected color change is the color that is produced from mixing**

a) baking soda with vinegar b) iodine with cornstarch

c) food colors with water d) salt with water.

51- **People cannot drink the water of oceans and seas because it is a mixture of water and ………………..**

a) salt only b) minerals only

c) living organisms only d) all the previous

52-. **We can use …………….. processes to separate fresh drinkable water from the water of seas and oceans.**

a) filtration and rusting b) evaporation and melting

c) filtration and coloring d) filtration and evaporation

53-. **We can use filtration process to remove all the following from sea water, except**

a) seaweed b) salt c) shells d) fish

Complete the following sentences:

1- States of matter are ……………, liquid and …………….
2- Gasoline is a …………… matter while sand is a …………… matter.
3- Iron and gold are examples of …………… state of matter.
4- Any matter is made up of millions of tiny …………… that we cannot see with our eyes.
5- The shape of …………… matter doesn't change unless something is happening to change it.
6- Liquids have definite ……………, but their ……………is not definite.
7- …………… have no definite shape and no definite volume.
8- Particles of …………… matters are very close to each other.
9- Particles of ………………. matter can slide over each other so they take the ………….……. of their containers.
10- Particles of ………………… matters vibrate around their place.
11- The Earth is a planet in the ……………….. system.
12- The ……………….. of a pen can be measured by using a ruler.
13- When an ice cube is exposed to the Sun, the speed of movement of its particles will ………………..
14- Water evaporates when it is exposed to ……………….. temperature.
15- When we keep water inside the freezer, the state of water changes from ……………….. state into ………………… state.
16- The roof of desert home is …………… and made up of ………………...
17- We can use different materials to make a roof, depending on the ………………….…. where the home is located.
18- Both of odor and texture of matter are considered from the ………………….. properties of matter.
19- The temperature ……………………. by increasing the speed of moving particles of a matter.
20- The ………………. of your school bag can be determined by a balance.
21- ……………is used in making gloves because it is waterproof and ……….
22- An iron ruler …………… in water, and …………… to the magnet.

23- Helium is ………………. than air, and this property is considered as ……………..…property.

24- Matter can be changed from one state to another by changing its ………………………….

25- When ice melts, it turns from …………… state to …………… state.

26- Condensation changes the matter from ……………state to …………state.

27- When we heat a liquid, the distance between its particles will …………….

28- Melting process occurred by ……………the temperature of the matter.

29- 0°C is the freezing point of …………….

30- The reversible changes of matter are usually ……………changes.

31- The change in the structure of the original matter producing a new matter is known as ……………change.

32- Cutting a paper into pieces is considered as a ……………… change, while burning it is considered as a ………………….. change.

33- The reaction between some metals and ……………gas causes loss of their shining, and this reaction is considered as a …………… change of matter.

34- When oxygen combines with carbon and hydrogen, …………… energy is produced.

35- Iron rusting is a …………change, while iron painting is a ………change.

36- Making yoghurt from milk is a …………………….. change.

37- ………………. and ………………. are ways of mixtures separation.

38- Salty water is a mixture that consists of salt which is a ………………. state of matter and water which is a ……………….. state of matter.

39- To separate mud from salty water we can use ……………….. process.

40- When two substances combine and form a new substance, this new substance is called a ……………………….

41- If we have 6 gm of water and 6 gm of sugar, after mixing them the mass of whole mixture will be ………………… gm.

42- The mass of a mixed substance will not be changed during formation of ………………., but their properties will be changed.

43- By mixing salt with pepper, a …………………… is formed which has no change in the properties and …………………. of its components.

Write the scientific term:

1- Anything that has a mass and a volume. (……………..)

2- The state of water after its freezing. (……………..)

3- A property of matter by which we can distinguish between hot and cold objects. (……………..)

4- The state of matter that has definite volume and shape. (……………..)

5- The state of matter that has a lot of spaces between its particles.(…………..)

6- Matter that takes the shape of its container, but its volume cannot be changed. (……………..)

7- The building units of matter. (……………..)

8- A device used to examine objects that are too small to be seen with the naked eye. (……………..)

9- It is the amount of space that matter takes up. (……………..)

10- A copy that is similar to a real thing which we cannot observe with our eyes. (……………..)

11- The property of matter which is measured by the measuring cup.(………)

12- The properties of matter which you can observe them by using your five senses. (……………..)

13- The properties of matter which can be observed and measured by the changes that happen when the material interacts with other materials. (……………..)

14- It is a measure of the amount of matter. (……………..)

15- It is a measure of how quickly the particles in a matter are moving. (……………..)

16- It is a light gas which is used in filling blimps. (……………..)

17- The ability of material to transfer heat and conduct electricity. (……………..)

18- They are changes in matter which are usually reversible and don't affect its structure. (……………..)

19- It is the substance that consists of more than one matter that don’t have any physical or chemical change in their properties. (……………..)

20-A matter that is formed when two or more materials combine chemically. (……………..)

21-The process of removing salt from salt water. (……………..)

22-The process which can be used to remove any large materials from sea and ocean water. (……………..)

23-The process which can be used to separate salt and minerals from salt water of seas and oceans. (……………..)

Put (√) or (x):

1- Matter never changes from one state to another. ( )

2- All matters are made up of tiny particles that are in a continuous motion.( )

3- All forms of matter are colored. ( )

4- Particles of wood are different from particles of plastic. ( )

5- All forms of matter have volume. ( )

6- Particles of water can move more freely than the particles of water vapor. ( )

7- Air particles are visible as they are very large particles. ( )

8- All matters have only one shape. ( )

9- Two equal amounts of sugar and salt cannot take up the same space at the same time. ( )

10- Air is matter so it has mass. ( )

11- Particles of solid matter are spread out from each other. ( )

12- Gases don't have a definite shape or volume. ( )

13- Particles of liquids move faster than solids and have a definite volume. ( )

14- Particles of an aluminium spoon are similar to particles of a golden ring. ( )

15- Frozen vegetables and vinegar have definite shape. ( )

16- Liquid particles move more freely than solid particles. ( )

17- Both gold and milk have definite shape. ( )

18- Natural gas used in gas oven has no definite shape or volume. ( )

19- All objects can be seen with the naked eye. ( )

20- The type of particles affects their size. ( )

21- Models help us understand ideas, objects or processes. ( )
22- Germs are very large organisms that can be seen with the naked eye. ( )
23- Most germs can spread through the air from a person to another. ( )
24- Models help us understand things that we can easily see with our eyes. ( )
25- The roof of tropical rainforest home is made up of leaves and sticks. ( )
26- The length of the classroom wall is measured by using a balance. ( )
27- We can describe a solid matter by its color and shape. ( )
28- We can differentiate between sugar and salt by using their color. ( )
29- Burning of fuel is considered from chemical properties of fuel. ( )
30- One kilogram of water has a volume equals 1000 milliliters. ( )
31- All physical properties of matter can be measured. ( )
32- Changing the shape of matter doesn't affect its mass. ( )
33- Salt and sugar have the same color and odor. ( )
34- If we put a wood cube in water it will float. ( )
35- Iron nail is attracted to the magnet and floats on the surface of water. ( )
36- If the masses of two different materials are equal, so their volume must be equal. ( )
37- From the chemical properties of helium is that it is not flammable. ( )
38- When a balloon is filled with helium, it will fall down on the ground. ( )
39- If a matter absorbs light energy, its particles vibrate and move faster. ( )
40- An ice cream turns into liquid by cooling. ( )
41- Freezing takes place by cooling, while melting takes place by heating. ( )
42- If we increase the temperature of some pieces of ice, they will melt. ( )
43- Cutting a piece of cloth is considered as a physical change because it produces a new substance. ( )
44- Melting and freezing are reversible processes. ( )
45- Water remains liquid between 0°C and 100°C. ( )
46- When hot water vapor hits cooler air it forms steam. ( )
47- Melting of wax produces new substance. ( )
48- Digestion of food forms a new substance which has new properties. ( )
49- There is a change in shape when you coil a piece of paper. ( )
50- Rusting of iron doesn't change the structure of iron. ( )

51- The mass of some pieces of ice will be the same when they are melted. ( )

52- We can use evaporation process to form mixtures. ( )

53- The mass of an amount of apple juice will change if we mix it with water. ( )

54- The change that is produced as a result of iron rusting is the same change produced from making bread. ( )

55- During chemical change, the properties of the matter will be changed. ( )

56- By mixing some vegetables together their properties will change. ( )

57- You can taste the salt in salty water mixture. ( )

58- You can see the different components of the salty water. ( )

59- Atmospheric air is considered as a mixture because it consists of liquids and gases matter. ( )

60- The mass and properties of oil will change when mixing it with vinegar. ( )

61- Salt and pepper mixture is formed from two solid materials mixed together. ( )

62- You can separate oil from water by filtration process. ( )

63- When dissolving salt in water, the salt disappears forming a new substance. ( )

64- Formation of ash during burning of paper is considered as a change which forms a new substance. ( )

65- We can separate baking soda from vinegar easily after mixing them together. ( )

66- All people around the world can reach fresh water easily. ( )

67- Water of oceans and seas is considered as a mixture because it consists of water, minerals and gases. ( )

68- Among the problems of desalination process is that it requires a lot of energy and it is very expensive process. ( )

69- To get drinkable water from salty water we can use filtration process only. ( )

70- Among environmental problems which caused by desalination process is that it is very expensive process. ( )

Correct the underlined words:

1- Matter can be found in <u>2 states</u>. (……………..)
2- The state of the air we breathe is <u>solid</u>. (……………..)
3- Carbon dioxide is a <u>liquid</u> matter. (……………..)
4- Light and sound are forms of <u>matter</u>. (……………..)
5- <u>Gases</u> keep their shape and volume whatever the container changes. (……………..)
6- On transferring water from one pot to another, its <u>volume</u> will change. (……………..)
7- To describe the particles of a matter in <u>liquid</u> state by modeling balls, we should put the balls packed together. (……………..)
8- <u>Regular microscope</u> is used to examine one tiny particle such as a blood cell. (……………..)
9- We can measure the volume of an amount of oil by using <u>tape measure</u>. (……………..)
10- The <u>volume</u> of a liquid can be measured in kilogram. (……………..)
11- The volume of 1000 cubic centimeters of a liquid is equal the same volume of <u>1 gram</u>. (……………..)
12- Shape is one of <u>chemical</u> properties of matter. (……………..)
13- The mass of 1 kilogram of apple equals the mass of <u>100</u> pieces of paper clip. (……………..)
14- When particles of matter move quickly they produce more <u>electrical</u> energy. (……………..)
15- Blimps are filled with <u>oxygen</u> gas to rise up in the air. (……………..)
16- Rubber is <u>very hard</u>, so it is used in making athletic shoes. (……………..)
17- When particles of a matter <u>absorb</u> thermal energy, they move slower. (……………..)
18- Freezing of liquid chocolate needs <u>high</u> temperature. (……………..)
19- When we boil water, it will <u>condense</u>. (……………..)
20- When a solid matter gains thermal energy, it will change into <u>gas</u> state. (……………..)

21- To change water from solid state to liquid and then to gas state, we need to decrease the temperature. (……………..)

22- When you strike a match, light energy and electrical energy are produced. (……………..)

23- We can separate sand from water by using evaporation process. (……………..)

24- The properties of the components of mixture change after mixing them with each other. (……………..)

25- The substances that form a compound combine physically forming a new substance. (……………..)

26-.By adding iodine to starch, the color of the formed compound will change into dark green. (……………..)

27-.Burning fuel in car is considered as physical change. (……………..)

28-.The mass of salt in salty water will be increased after the mixture is formed. (……………..)

29-.After evaporation of seawater, the water vapor turns into liquid water by heating. (……………..)

30-.Drinking salt water makes the human body dehydrate slower.(…………..)

Choose from column (B) what suits it in column (A)

1)

(A)	(B)
1) Carbon dioxide	a) has a definite volume but has not definite shape.
2) Sand	b) take the shape and the volume of their containers.
3) Globe	c) tool used to measure the length of a wall.
4) Gasoline	d) has a fixed shape and volume.
5) Measuring tape	e) A model of the whole world that is made in the shape of a large ball.

1	2	3	4	5
……..	……..	……..	……..	……..

2)

(A)	(B)
1) Thermometer	a) is used to determine the length of a book.
2) Ruler	b) is used to determine the mass of some apples.
3) Measuring cup	c) is used to determine the temperature of a hot cup of tea.
4) Balance	d) is used to determine the volume of an amount of water

1	2	3	4
……..	……..	……..	……..

3)

(A)	(B)
1) Melting	a) is the change of water from liquid state to gas state.
2) Freezing	b) is the change of water from gas state to liquid state.
3) Evaporation	c) is the change of water from solid state to liquid state.
4) Condensation	d) is the change of water from liquid state to solid state.

1	2	3	4
……..	……..	……..	……..

4)

(A)	(B)
1) Expected change in color	a) cutting a tomato into small pieces.
2) Formation of strong odor	b) adding drops of food colors to a cup of water.
3) Change in size	c) mixing iodine with cornstarch.
4) Unexpected change in color	d) leaving a cup of milk out of fridge for a long time.

1	2	3	4
……..	……..	……..	……..

Cross out the odd words and name the group:

1- Oil – Milk – Water – Wood.
   ➢ The group: ………………………………………………

2- Plastic – Vinegar – Iron – Aluminium.
   ➢ The group: ………………………………………………

3- Coal - Carbon dioxide – Oxygen – Air.
   ➢ The group: ………………………………………………

4- Wood – Iron – Oxygen – Gold.
   ➢ The group: ………………………………………………

5- Shape – mass – rusting – color.
   ➢ The group: ………………………………………………

6- Kilogram (kg) – milliliters (m) – cubic centimeters (cm^3) – liters (L).
   ➢ The group: ………………………………………………

7- Mass – gram – kilogram – liters.
   ➢ The group: ………………………………………………

Give reasons for:

1- Salt is a matter.
➢ ……………………………………………………………………..

2- Sugar is a solid matter.
➢ ……………………………………………………………………..

3- Wood has definite shape and volume.
➢ ……………………………………………………………………..

4- Oxygen has no definite shape or volume.
➢ ……………………………………………………………………..

5- Particles of gases can spread out quickly to fill up any container they put in.
➢ ……………………………………………………………………..

6- Both liquids and gases don't have a definite shape and take the shape of their containers.
➢ ……………………………………………………………………..

7- Oil used in cooking is considered as an example of liquid matter.

➢ ……………………………………………………………………………..

8- Rubber differs from iron. (According to their hardness).

➢ ……………………………………………………………………………..

9- Using models to study some scientific concepts.

➢ ……………………………………………………………………………..

10- Sometimes we need to use an electron microscope.

➢ ……………………………………………………………………………..

11- The roof of desert home is made of strong stones.

➢ ……………………………………………………………………………..

12- The roof of tropical rainforest home is made of leaves and sticks.

➢ ……………………………………………………………………………..

13- Rains and snow can't enter homes of cold weather regions.

➢ ……………………………………………………………………………..

14- Rusting of iron is considered from chemical properties of matter.

➢ ……………………………………………………………………………..

15- When the particles of a matter move quickly, its temperature increases.

➢ ……………………………………………………………………………..

16- Helium is used to fill balloons and blimps.

➢ ……………………………………………………………………………..

17- Human can use helium gas safely.

➢ ……………………………………………………………………………..

18- Copper is used in making cooking pans.

➢ ……………………………………………………………………………..

19- Wood and plastic are used in making handles of cooking pans.

➢ ……………………………………………………………………………..

20- Copper is used in making electrical wires.

➢ ……………………………………………………………………………..

21- Steel is used in making hammers.

➢ ……………………………………………………………………………..

22- Glass can be used in making eyeglasses.

➢ ……………………………………………………………………………..

23-Ice is turned into water when it is placed in a warm room.

- ……………………………………………………………………………..

24-Formation of water drops when water vapor touches a cold surface.

- ……………………………………………………………………………..

25-Both melting and freezing processes are considered as physical changes.

- ……………………………………………………………………………..

26-Making bread is considered as a chemical change.

- ……………………………………………………………………………..
  ……………………………………………………………………………..

27-Fruit salad and salty water are considered as mixtures.

- ……………………………………………………………………………..
  ……………………………………………………………………………..

28-Air is considered as a mixture.

- ……………………………………………………………………………..

29-Filtration process is used to separate sand from water.

- ……………………………………………………………………………..

30-By adding baking soda to vinegar the properties of each of them are changed.

- ……………………………………………………………………………..

31-Formation of a bad odor when milk is left out of the fridge for several days.

- ……………………………………………………………………………..

32-The components of mixture don't produce a new substance when combining together.

- ……………………………………………………………………………..

33-Formation of a layer with reddish color on the surface of a wet iron wire.

- ……………………………………………………………………………..

34-We cannot drink the water of oceans and seas.

- ……………………………………………………………………………..
  ……………………………………………………………………………..

What happens if (to)……..:

1- We put small amount of milk in the freezer for few hours. (According to the state of milk)

➢ ………………………………………………………………………………..

2- Water is heated in the kettle for few minutes. (According to the state of water after heating).

➢ ………………………………………………………………………………..

3- We put three equal amounts of water in three different containers. (According to the shape of water)

➢ ………………………………………………………………………………..

4- We transfer it from a cup to another cup. (According to the volume of a coin)

➢ ………………………………………………………………………………..

5- Water changes into ice. (According to its shape).

➢ ………………………………………………………………………………..

6- The arrangement of particles of water after its freezing.

➢ ………………………………………………………………………………..

7- A liquid changes into gas. (According to the speed of particles)

➢ ………………………………………………………………………………..

8- We try to examine the particles of any substance with our naked eyes.

➢ ………………………………………………………………………………..

9- The size of a balloon when you blow it up.

➢ ………………………………………………………………………………..

10- The speed of particles of an ice cube when it is exposed to the Sun.

➢ ………………………………………………………………………………..

11- The roof of cold weather homes is flat.

➢ ………………………………………………………………………………..

12- A piece of paper interacts with fire.

➢ ………………………………………………………………………………..

13- The speed of particles of a matter decreases. (according to its temperature)

➢ ………………………………………………………………………………..

14- A magnet is put close to an iron nail and a plastic spoon.

➢ ……………………………………………………………………………………

……………………………………………………………………………………

15- A piece of cork is put in water.

➢ ……………………………………………………………………………………

16- A blimp is filled with helium gas.

➢ ……………………………………………………………………………………

17- Electrical wire is made from plastic instead of copper.

➢ ……………………………………………………………………………………

18- You touch a handle of cooking pan made of copper and putted on gas oven.

➢ ……………………………………………………………………………………

19- We heat an amount of water. (according to the motion of particles)

➢ ……………………………………………………………………………………

20- The particles of water when its temperature is decreased below 0°C.

➢ ……………………………………………………………………………………

21- The particles of water when we increase its temperature above 100°C.

➢ ……………………………………………………………………………………

……………………………………………………………………………………

22- We mix iodine with cornstarch.

➢ ……………………………………………………………………………………

23- Oxygen, carbon and hydrogen are combining together.

➢ ……………………………………………………………………………………

24- You expose a shiny piece of metal to air (oxygen) for a long period of time.

➢ ……………………………………………………………………………………

25- Salty water when heating it for a long time.

➢ ……………………………………………………………………………………

26- The mass and properties of sugar when adding it to an amount of flour.

➢ ……………………………………………………………………………………

Best Wishes

Dr/ Zeinab Salah

G5 Final Revision unit 2

Choose the correct answer:

1- Water can be found in a solid state in the form of ……………..…

a) ice b) steam c) sea water d) boiling water.

2- An example of a gas is ……………….

a) chocolate b) rock c) pencil d) oxygen

3- Both …………….. and …………….. have the same state of matter.

a) wood – water b) plastic – oil c) wood – milk d) wood – plastic

4- By changing the ……….….. of a matter, its state may change.

a) mass b) volume c) color d) temperature

5- All of these substances are liquids, except ………..

a) Oil b) milk c) stone d) Vinegar

6- Both …… and …….. are solids as they have definite shape and volume.

a) Wood – oxygen b) milk – iron c) wood – iron d) milk – oxygen

7- All the following are liquid matters that used in preparing food, except

a) water b) vinegar c) oil d) rice

8- One of the substances that doesn't take the shape of its container is ……..

a) oil b) coin c) gasoline d) water.

9- The movement of water particles is slower than that of ……………

a) wood b) plastic c) air d) gold.

10- Particles of …………………. vibrate around their place.

a) glass b) air c) oxygen d) water

11- We can use a model to study very large things such as ………...

a) solar system b) germs c) microbes d) viruses.

12- Some liquids come out of a ………… during its eruption.

a) star b) sun c) volcano d) plastic piece

13- All the following can be used to describe matter except ………

a) shape b) price c) color d)texture

14- Which of the following homes have an inclined roof?

a) Desert homes only. **b) Tropical rainforest homes only.**

c) Desert homes and cold weather homes.

d) Tropical rainforest homes and cold weather homes.

15- Homes which are built in a cold weather area have roofs made up of…..

a) ceramic tiles **b) strong stones**

c) carton paper **d) leaves and sticks.**

16- To measure the length of a table, we can use a ………..

a) thermometer **b) cylinder** **c) balance** **d) measuring tape**

17- We can measure the mass of a cube of ice by using a ………..…

a) thermometer **b) cylinder** **c) balance** **d) ruler**

18- We can identify milk by determining its ………...

a) color and texture **b) color and size**

c) shape and odor **d) color and taste**

19- All the following properties of matter can be measured by different tools except……………….

a) mass **b) volume** **c) color** **d) temperature**

20- All the following are physical properties of matter except…………

a) color **b) rusting** **c) texture** **d)shape.**

21- Burning of wood is considered as ……………….. of matter.

a) only physical property **b) only chemical property**

c) both physical and chemical properties

d) neither physical nor chemical properties

22- When the iron interacts with water and air, it ……….

a) becomes ash **b) becomes powder** **c) rusts** **d) burns.**

23- If water is exposed to high temperature, its particles will move ………. and the water may change into ……………

a) faster – ice **b) faster – water vapor**

c) slower – ice **d) slower – water vapor.**

24- Which of the following matter is attracted to the magnet?

a) Ice cube **b) Iron clip** **c) Woody spoon** **d) Plastic ruler.**

25- We can measure the volume of a liquid by all the following units except……………………………

a) <u>kilogram</u> b) milliliters c) cubic centimeters d) liters.

26- The volume of one liter of water has a mass of …………

a) one gram b) <u>one kilogram</u>

c) one milliliter d) one cubic centimeter.

27- Which of the following matter floats on the surface of water?

a) Iron spoon b) Piece of stone c) Iron nail d) <u>Piece of cork</u>.

28- Which of the following matter sinks and not attracts to the magnet?

a) Wood cube b) Iron nail c) <u>A stone</u> d) Plastic cup.

29- If we cut a tomato into 2 halves, so the …………. of one half of tomato will decrease to half.

a) <u>mass</u> b) shape c) color d) temperature

30- When you put a lighting match close to helium gas, it will …..

a) burn b) <u>not burn</u> c) form fire d) Freeze

31- All the following are from physical properties of copper, except that…………….

a) it is good conductor of heat. b) it is good conductor of electricity.

c) it can be stretched into thin wires. d) <u>it is lighter than air</u>.

32- We can use copper to make ………..

a) handles of cooking pans b) tires

c) <u>body of cooking pans</u> d)gloves

33- Rubber is used to make all the following, except ………….

a) athletic shoes b) gloves c) tires d) <u>windows</u>

34- Ice can turn into water by ………….

a) cooling b) freezing c) rusting d) <u>heating</u>

35- All the following happen to the particles of oil when it is cooled, except that they ……………….

a) move slower b) <u>move faster</u>

c) vibrate less d) come close together

36- When the temperature of water is decreased below 0°C, it will be turned into ………………..

a) water vapor
b) clear water
c) hot water
d) ice

37- Physical processes which need heating include …………….

a) melting and freezing
b) melting and condensation
c) melting and evaporation
d) freezing and evaporation

38- The two processes which cause particles of matter get close together are ……………………..

a) freezing and condensation
b) freezing and melting
c) freezing and evaporation
d) melting and condensation

39- Physical changes of matter include ……………..

a) melting only
b) freezing only
c) both melting and freezing
d) neither melting nor freezing

40- From the changes which don't form a new substance is …………..

a) burning of paper
b) cutting of wood
c) baking bread
d) rusting of iron

41- Among chemical changes which occurred in cooking is ………

a) cutting vegetables
b) boiling of water
c) melting of chocolate
d) baking a cake

42- During burning of wood, …….……. energies are produced.

a) electrical and light
b) thermal and light
c) thermal and electrical
d) sound and electrical.

43- The ….…….. of iodine will not change after mixing it with starch.

a) mass only
b) color only
c) color and mass
d) properties and mass

44- Salt can be separated by ……………………… of salty water.

a) filtration b) evaporation c) melting d) freezing

45- To separate sand only from salty water, we can use .... process.

a) filtration b) evaporation c) melting d) freezing

46- **A compound has all the following properties, except that its components………………….**

a) combine chemically **b) form new substance**

c) change in their shapes

d) do not change chemically or physically

47- **By adding baking soda to vinegar, a ………….. is formed.**

a) Powder **b) compound** **c) mixture** **d) solid matter**

48- **If we mix two equal masses of salt and oil so, their total mass will ……………. after mixing.**

a) equal to zero **b) decrease** **c) increase** **d) not change**

49- **Among mixtures between two liquids is ……………..….**

a) vinegar and salt mixture **b) orange juice and apple juice**

c) salty water mixture **d) sand and water mixture**

50- **Among chemical unexpected color change is the color that is produced from mixing**

a) baking soda with vinegar **b) iodine with cornstarch**

c) food colors with water **d) salt with water.**

51- **People cannot drink the water of oceans and seas because it is a mixture of water and ………………..**

a) salt only **b) minerals only**

c) living organisms only **d) all the previous**

52-. **We can use …………….. processes to separate fresh drinkable water from the water of seas and oceans.**

a) filtration and rusting **b) evaporation and melting**

c) filtration and coloring **d) filtration and evaporation**

53-. **We can use filtration process to remove all the following from sea water, except**

a) seaweed **b) salt** **c) shells** **d) fish**

Complete the following sentences:

1- States of matter are solid, liquid and gas.
2- Gasoline is a liquid matter while sand is a solid matter.
3- Iron and gold are examples of solid state of matter.
4- Any matter is made up of millions of tiny particles that we cannot see with our eyes.
5- The shape of solid matter doesn't change unless something is happening to change it.
6- Liquids have definite volume, but their shape is not definite.
7- Gases have no definite shape and no definite volume.
8- Particles of solid matters are very close to each other.
9- Particles of liquid matter can slide over each other so they take the shape of their containers.
10- Particles of solid matters vibrate around their place.
11- The Earth is a planet in the solar system.
12- The length of a pen can be measured by using a ruler.
13- When an ice cube is exposed to the Sun, the speed of movement of its particles will increase.
14- Water evaporates when it is exposed to high temperature.
15- When we keep water inside the freezer, the state of water changes from liquid state into solid state.
16- The roof of desert home is flat and made up of strong stones.
17- We can use different materials to make a roof, depending on the climate where the home is located.
18- Both of odor and texture of matter are considered from the physical properties of matter.
19- The temperature increases by increasing the speed of moving particles of a matter.
20- The mass of your school bag can be determined by a balance.
21- Rubber is used in making gloves because it is waterproof and flexible.
22- An iron ruler sinks in water, and attract to the magnet.

23- Helium is lighter than air, and this property is considered as physical property.

24- Matter can be changed from one state to another by changing its temperature.

25- When ice melts, it turns from solid state to liquid state.

26- Condensation changes the matter from gas state to liquid state.

27- When we heat a liquid, the distance between its particles will increase.

28- Melting process occurred by increasing the temperature of the matter.

29- 0°C is the freezing point of water.

30- The reversible changes of matter are usually physical changes.

31- The change in the structure of the original matter producing a new matter is known as chemical change.

32- Cutting a paper into pieces is considered as a physical change, while burning it is considered as a chemical change.

33- The reaction between some metals and oxygen gas causes loss of their shining, and this reaction is considered as a chemical change of matter.

34- When oxygen combines with carbon and hydrogen, thermal energy is produced.

35- Iron rusting is a chemical change, while iron painting is a physical change.

36- Making yoghurt from milk is a chemical change.

37- Evaporation and filtration are ways of mixtures separation.

38- Salty water is a mixture that consists of salt which is a solid state of matter and water which is a liquid state of matter.

39- To separate mud from salty water we can use filtration process.

40- When two substances combine and form a new substance, this new substance is called a compound.

41- If we have 6 gm of water and 6 gm of sugar, after mixing them the mass of whole mixture will be 12 gm.

42- The mass of a mixed substance will not be changed during formation of mixture, but their properties will be changed.

43- By mixing salt with pepper, a mixture is formed which has no change in the properties and mass of its components.

Write the scientific term:

1-Anything that has a mass and a volume. (matter)

2-The state of water after its freezing. (solid state)

3-A property of matter by which we can distinguish between hot and cold objects. (temperature)

4-The state of matter that has definite volume and shape. (solid)

5-The state of matter that has a lot of spaces between its particles. (gas)

6-Matter that takes the shape of its container, but its volume cannot be changed. (liquid)

7-The building units of matter. (particles)

8-A device used to examine objects that are too small to be seen with the naked eye. (microscope)

9-It is the amount of space that matter takes up. (volume)

10- A copy that is similar to a real thing which we cannot observe with our eyes. (model)

11- The property of matter which is measured by the measuring cup.(volume)

12- The properties of matter which you can observe them by using your five senses. (physical properties)

13- The properties of matter which can be observed and measured by the changes that happen when the material interacts with other materials. (chemical properties)

14- It is a measure of the amount of matter. (Mass)

15- It is a measure of how quickly the particles in a matter are moving. (Temperature)

16- It is a light gas which is used in filling blimps. (Helium)

17- The ability of material to transfer heat and conduct electricity. (conduction)

18- They are changes in matter which are usually reversible and don't affect its structure. (physical changes)

19- It is the substance that consists of more than one matter that don’t have any physical or chemical change in their properties. (Mixture)

20-A matter that is formed when two or more materials combine chemically. (Compound)

21-The process of removing salt from salt water. (desalination process)

22-The process which can be used to remove any large materials from sea and ocean water. (filtration)

23-The process which can be used to separate salt and minerals from salt water of seas and oceans. (evaporation)

Put (√) or (x):

1- Matter never changes from one state to another. (x)

2- All matters are made up of tiny particles that are in a continuous motion.(√)

3- All forms of matter are colored. (x)

4- Particles of wood are different from particles of plastic. (√)

5- All forms of matter have volume. (√)

6- Particles of water can move more freely than the particles of water vapor. (x)

7- Air particles are visible as they are very large particles. (x)

8- All matters have only one shape. (x)

9- Two equal amounts of sugar and salt cannot take up the same space at the same time. (√)

10- Air is matter so it has mass. (√)

11- Particles of solid matter are spread out from each other. (x)

12- Gases don't have a definite shape or volume. (√)

13- Particles of liquids move faster than solids and have a definite volume. (√)

14- Particles of an aluminium spoon are similar to particles of a golden ring. (x)

15- Frozen vegetables and vinegar have definite shape. (x)

16- Liquid particles move more freely than solid particles. (√)

17- Both gold and milk have definite shape. (x)

18- Natural gas used in gas oven has no definite shape or volume. (√)

19- All objects can be seen with the naked eye. (x)

20- The type of particles affects their size. (√)

21- Models help us understand ideas, objects or processes. (√)
22- Germs are very large organisms that can be seen with the naked eye. (x)
23- Most germs can spread through the air from a person to another. (√)
24- Models help us understand things that we can easily see with our eyes. (x)
25- The roof of tropical rainforest home is made up of leaves and sticks. (√)
26- The length of the classroom wall is measured by using a balance. (x)
27- We can describe a solid matter by its color and shape. (√)
28- We can differentiate between sugar and salt by using their color. (x)
29- Burning of fuel is considered from chemical properties of fuel. (√)
30- One kilogram of water has a volume equals 1000 milliliters. (√)
31- All physical properties of matter can be measured. (x)
32- Changing the shape of matter doesn't affect its mass. (√)
33- Salt and sugar have the same color and odor. (x)
34- If we put a wood cube in water it will float. (√)
35- Iron nail is attracted to the magnet and floats on the surface of water. (x)
36- If the masses of two different materials are equal, so their volume must be equal. (x)
37- From the chemical properties of helium is that it is not flammable. (√)
38- When a balloon is filled with helium, it will fall down on the ground. (x)
39- If a matter absorbs light energy, its particles vibrate and move faster. (√)
40- An ice cream turns into liquid by cooling. (x)
41- Freezing takes place by cooling, while melting takes place by heating. (√)
42- If we increase the temperature of some pieces of ice, they will melt. (√)
43- Cutting a piece of cloth is considered as a physical change because it produces a new substance. (x)
44- Melting and freezing are reversible processes. (√)
45- Water remains liquid between 0°C and 100°C. (√)
46- When hot water vapor hits cooler air it forms steam. (√)
47- Melting of wax produces new substance. (x)
48- Digestion of food forms a new substance which has new properties. (√)
49- There is a change in shape when you coil a piece of paper. (√)
50- Rusting of iron doesn't change the structure of iron. (x)

51- The mass of some pieces of ice will be the same when they are melted. (√)

52- We can use evaporation process to form mixtures. (x)

53- The mass of an amount of apple juice will change if we mix it with water. (x)

54- The change that is produced as a result of iron rusting is the same change produced from making bread. (√)

55- During chemical change, the properties of the matter will be changed. (√)

56- By mixing some vegetables together their properties will change. (x)

57- You can taste the salt in salty water mixture. (√)

58- You can see the different components of the salty water. (x)

59- Atmospheric air is considered as a mixture because it consists of liquids and gases matter. (x)

60- The mass and properties of oil will change when mixing it with vinegar. (x)

61- Salt and pepper mixture is formed from two solid materials mixed together. (√)

62- You can separate oil from water by filtration process. (x)

63- When dissolving salt in water, the salt disappears forming a new substance. (x)

64- Formation of ash during burning of paper is considered as a change which forms a new substance. (√)

65- We can separate baking soda from vinegar easily after mixing them together. (x)

66- All people around the world can reach fresh water easily. (x)

67- Water of oceans and seas is considered as a mixture because it consists of water, minerals and gases. (√)

68- Among the problems of desalination process is that it requires a lot of energy and it is very expensive process. (√)

69- To get drinkable water from salty water we can use filtration process only. (x)

70- Among environmental problems which caused by desalination process is that it is very expensive process. (x)

Correct the underlined words:

1- Matter can be found in 2 states. (3 states)
2- The state of the air we breathe is solid. (gas)
3- Carbon dioxide is a liquid matter. (gas)
4- Light and sound are forms of matter. (energy)
5- Gases keep their shape and volume whatever the container changes. (Solids)
6- On transferring water from one pot to another, its volume will change. (shape)
7- To describe the particles of a matter in liquid state by modeling balls, we should put the balls packed together. (solid)
8- Regular microscope is used to examine one tiny particle such as a blood cell. (electron microscope)
9- We can measure the volume of an amount of oil by using tape measure. (measuring cup)
10- The volume of a liquid can be measured in kilogram. (mass)
11- The volume of 1000 cubic centimeters of a liquid is equal the same volume of 1 gram. (1 liter)
12- Shape is one of chemical properties of matter. (physical)
13- The mass of 1 kilogram of apple equals the mass of 100 pieces of paper clip. (1000)
14- When particles of matter move quickly they produce more electrical energy. (thermal)
15- Blimps are filled with oxygen gas to rise up in the air. (helium)
16- Rubber is very hard, so it is used in making athletic shoes. (flexible)
17- When particles of a matter absorb thermal energy, they move slower. (lose)
18- Freezing of liquid chocolate needs high temperature. (low)
19- When we boil water, it will condense. (evaporate)
20- When a solid matter gains thermal energy, it will change into gas state. (liquid)

21- To change water from solid state to liquid and then to gas state, we need to decrease the temperature. (increase)

22- When you strike a match, light energy and electrical energy are produced. (thermal)

23- We can separate sand from water by using evaporation process. (filtration)

24- The properties of the components of mixture change after mixing them with each other. (compound)

25- The substances that form a compound combine physically forming a new substance. (chemically)

26-.By adding iodine to starch, the color of the formed compound will change into dark green. (blue)

27-.Burning fuel in car is considered as physical change. (chemical)

28-.The mass of salt in salty water will be increased after the mixture is formed. (the same)

29-.After evaporation of seawater, the water vapor turns into liquid water by heating. (Cooling)

30-.Drinking salt water makes the human body dehydrate slower. (faster)

Choose from column (B) what suits it in column (A)

1)

(A)	(B)
1) Carbon dioxide	a) has a definite volume but has not definite shape.
2) Sand	b) take the shape and the volume of their containers.
3) Globe	c) tool used to measure the length of a wall.
4) Gasoline	d) has a fixed shape and volume.
5) Measuring tape	e) A model of the whole world that is made in the shape of a large ball.

1	2	3	4	5
b	d	e	a	c

2)

(A)	(B)
1) Thermometer	a) is used to determine the length of a book.
2) Ruler	b) is used to determine the mass of some apples.
3) Measuring cup	c) is used to determine the temperature of a hot cup of tea.
4) Balance	d) is used to determine the volume of an amount of water

1	2	3	4
c	a	d	b

3)

(A)	(B)
1) Melting	a) is the change of water from liquid state to gas state.
2) Freezing	b) is the change of water from gas state to liquid state.
3) Evaporation	c) is the change of water from solid state to liquid state.
4) Condensation	d) is the change of water from liquid state to solid state.

1	2	3	4
c	d	a	b

4)

(A)	(B)
1) Expected change in color	a) cutting a tomato into small pieces.
2) Formation of strong odor	b) adding drops of food colors to a cup of water.
3) Change in size	c) mixing iodine with cornstarch.
4) Unexpected change in color	d) leaving a cup of milk out of fridge for a long time.

1	2	3	4
b	d	a	c

Cross out the odd words and name the group:

1- Oil – Milk – Water – Wood.
- The group: liquids.

2- Plastic – Vinegar – Iron – Aluminium.
- The group: solids.

3- Coal - Carbon dioxide – Oxygen – Air.
- The group: gases.

4- Wood – Iron – Oxygen – Gold.
- The group: solids.

5- Shape – mass – rusting – color.
- The group: physical properties.

6- Kilogram (kg) – milliliters (m) – cubic centimeters (cm^3) – liters (L).
- The group: measuring units of volume.

7- Mass – gram – kilogram – liters.
- The group: measuring units of mass.

Give reasons for:

1- Salt is a matter.
- Because it has mass and volume.

2- Sugar is a solid matter.
- Because it has mass and volume.

3- Wood has definite shape and volume.
- Because it is a solid matter.

4- Oxygen has no definite shape or volume.
- Because it is a gas matter.

5- Particles of gases can spread out quickly to fill up any container they put in.
- Because they are not held together.

6- Both liquids and gases don't have a definite shape and take the shape of their containers.
- Because their particles are arranged randomly.

7- Oil used in cooking is considered as an example of liquid matter.
- **Because it has a definite volume and its shape is not definite.**

8- Rubber differs from iron. (According to their hardness).
- **Because rubber is soft matter while iron is hard matter.**

9- Using models to study some scientific concepts.
- **To study them in an easier way.**

10- Sometimes we need to use an electron microscope.
- **To see the components of one particle.**

11- The roof of desert home is made of strong stones.
- **To protect home from dust and dirt.**

12- The roof of tropical rainforest home is made of leaves and sticks.
- **To protect home from rains and animals getting inside.**

13- Rains and snow can't enter homes of cold weather regions.
- **Because the roof of home is slanted and made of ceramic tiles.**

14- Rusting of iron is considered from chemical properties of matter.
- **Because rusting of iron is a change that happens to iron when it interacts with air and water.**

15- When the particles of a matter move quickly, its temperature increases.
- **Because quickly moving particles produce more heat energy.**

16- Helium is used to fill balloons and blimps.
- **Because helium gas is lighter than air.**

17- Human can use helium gas safely.
- **Because helium is not flammable or poisonous.**

18- Copper is used in making cooking pans.
- **Because it's good conductors of heat.**

19- Wood and plastic are used in making handles of cooking pans.
- **Because wood and plastic are bad conductors of heat.**

20- Copper is used in making electrical wires.
- **Because it's good conductors of electricity.**

21- Steel is used in making hammers.
- **Because it is hard and strong.**

22- **Glass can be used in making eyeglasses.**
- **Because it is transparent and smooth.**

23- **Ice is turned into water when it is placed in a warm room.**
- **Because it melts when its temperature increases.**

24- **Formation of water drops when water vapor touches a cold surface.**
- **Because particles of water vapor lose thermal energy and changed into liquid water.**

25- **Both melting and freezing processes are considered as physical changes.**
- **Because the matter changes without any change in its structure and they don’t form new matters.**

26- **Making bread is considered as a chemical change.**
- **Because it causes a change in the structure and form new matter.**

27- **Fruit salad and salty water are considered as mixtures.**
- **Because they formed from 2 or more materials that are not combined chemically.**

28- **Air is considered as a mixture.**
- **Because it consists of a mixture of different gases.**

29- **Filtration process is used to separate sand from water.**
- **Because the particles of water are smaller than that of sand.**

30- **By adding baking soda to vinegar the properties of each of them are changed.**
- **Because a new compound is formed.**

31- **Formation of a bad odor when milk is left out of the fridge for several days.**
- **Due to chemical changes that produce new substances.**

32- **The components of mixture don't produce a new substance when combining together.**
- **Because the components combine physically and don’t react chemically.**

33- **Formation of a layer with reddish color on the surface of a wet iron wire.**
- **Due to formation of new substance called iron oxide (rust).**

34- **We cannot drink the water of oceans and seas.**
- **Because it is a mixture of water, salts, minerals, gases and living and dead organisms.**

What happens if (to)……..:

1- We put small amount of milk in the freezer for few hours. (According to the state of milk)

➢ It becomes solid.

2- Water is heated in the kettle for few minutes. (According to the state of water after heating).

➢ It becomes a gas.

3- We put three equal amounts of water in three different containers. (According to the shape of water)

➢ It will change according to the shape of each container.

4- We transfer it from a cup to another cup. (According to the volume of a coin)

➢ It will not change.

5- Water changes into ice. (According to its shape).

➢ It will have a definite shape.

6- The arrangement of particles of water after its freezing.

➢ It will be organized (have a regular pattern).

7- A liquid changes into gas. (According to the speed of particles)

➢ It will increase.

8- We try to examine the particles of any substance with our naked eyes.

➢ Particles cannot be seen.

9- The size of a balloon when you blow it up.

➢ It will increase.

10- The speed of particles of an ice cube when it is exposed to the Sun.

➢ It will increase.

11- The roof of cold weather homes is flat.

➢ The rain will be collected on the top of homes.

12- A piece of paper interacts with fire.

➢ The paper becomes ash.

13- The speed of particles of a matter decreases. (according to its temperature)

➢ Its temperature will decrease.

14- A magnet is put close to an iron nail and a plastic spoon.
- The iron nail will attract to the magnet, while the plastic spoon will not attract to the magnet.

15- A piece of cork is put in water.
- It will float on the water surface.

16- A blimp is filled with helium gas.
- The blimp will rise up in the air.

17- Electrical wire is made from plastic instead of copper.
- It will not conduct electricity.

18- You touch a handle of cooking pan made of copper and putted on gas oven.
- I feel hot because copper is good heat conductor.

19- We heat an amount of water. (according to the motion of particles)
- The particles of water will move faster.

20- The particles of water when its temperature is decreased below 0°C.
- Particles lose more energy and move slower so water changed into ice.

21- The particles of water when we increase its temperature above 100°C.
- Particles gain more energy and move faster so water changed into water vapor.

22- We mix iodine with cornstarch.
- Dark blue color is produced due to formation of new substance.

23- Oxygen, carbon and hydrogen are combining together.
- Produce thermal energy and can start fire.

24- You expose a shiny piece of metal to air (oxygen) for a long period of time.
- The metal will lose its shining.

25- Salty water when heating it for a long time.
- Water will evaporate leaving the salt.

26- The mass and properties of sugar when adding it to an amount of flour.
- They will not change.

Best Wishes
Dr/ Zeinab Salah

①Choose the correct answers:

1. Plants produce their food through a process called ………………..

a. Proliferation b. photosynthesis c. growing d. breathing

2. All the following can help in seed dispersal, except………………..

a. water b. humans c. animals d. sunlight

3. All the following are from the plant basic needs, except…………………

a. water b. air c. soil d. sunlight

4. The blood rich in carbon dioxide gas return back to the heart through the……….

a. arteries b. veins c. lungs d. xylem

5. The stomata exist on in the plant

a. stems b. leaves c. root hairs d. stems and leaves

6. Which of the following living organisms can make their own food?

a. Bacteria b. Rabbits c. Acacia trees d. Caracals

7. Plants take…………………… from the air to make its own food.

a. water b. oxygen gas c. carbon dioxide gas d. sugar

8……………………..plant has climb stems.

a. Potato b. Tomato c. Vine d. Pine

9. Plants produce………………..during photosynthesis process

a. water and glucose

b. oxygen gas and glucose

c. carbon dioxide gas and water

d. glucose and carbon dioxide gas

10. When the plant is placed away from the source of light, it grows…………

a- strong b. healthy c. weak d. green

11. Hydroponic systems are used to replace the………….for the plant.

a- soil b. sunlight c. water d. carbon dioxide

12. Green plant can absorb nutrient from the soil by ………………….

a. stem b. root hairs c. leaves d. stomatat

13…………… ……….plant has climb stem.

a. Potato b. Tomato c. Vine d. Pine

14. The kind of stems that extend underground are called……………..

a. climb stems b. tubers c. runners d. wood stem

15. Potato plant has…………………stem.

a. upright b. climb c. tuber d. runners

16. Apple trees have……………

a. wood stems, b. climb stems, c. tubers. d. runners

17…………… …………….tree has narrow leaves.

a. Potato b. Pine c. Acacia d. grapes

18. The green plants can make their own food through…………

a. roots. b. stems. c. leaves. d. flowers

19. The green color of plant's leaves is due to the presence of ……………..

a. stomata b. chlorophyll c. phloem d.xylem

20. Food materials are transported from the leaves to other parts of the plant Through……………………..

a. xylem. b. phloem. c. chlorophyll. d. stomata.

21. During photosynthesis process, the plant produces………… that provides it with energy to survive.

a. carbon dioxide gas
b. oxygen gas
c. glucose sugar
d. water

22. ……………….carry blood which is rich with oxygen and glucose from the heart to the body cells.

a. Arteries b. Veins

c. Lungs and veins d. Brain and veins

23. Blood rich in carbon dioxide gas return back to the heart through………….

a. arteries . b. veins. c. lungs. d. xylem.

24. ……………….system in plants consists of tubes that water and nutrients move through it.

a. Digestive b. Respiratory c. Transport d. Nervous

25. The system in human that moves blood in the human body is called ……….. system.

a. digestive b. respiratory c. circulatory d. nervous

26. The reproductive parts of many plants are called……………….

a. veins. b. roots. c. leaves. d. flowers.

27. The tubes that are responsible for moving water and nutrients up the plants stem are called……………………..

a. root b. xylem c. leaves. d flowers

28. During photosynthesis, plants can convert ……………. into …………… energy.

a light-chemical b. chemical - light

c. light-thermal d. chemical – thermal

29. Food materials are transported from the leaves to other plant parts through the

a. stomata b. chlorophyll c. phloem d.xylem

30. All of the following parts represents the human circulatory system except …………..

a. arteries .. b. veins c. the heart d. lungs

31. Living organisms that can absorb sunlight to make their food are ………….

a. Animals only b. Plants only c. Animals and plant d. humans

32. Hawks get their energy from ……………………..

a. Animals only b. Plants only c. Animals and plant d. Non-living things

33. Hawk eats a rabbit to get energy, this means that ………………………

a. The hawk is a prey
b. The rabbit is a predator
c .The hawk is a predator
d. Hawk and rabbit are predators.

34. All of the following are considered as a source of energy for hawks except ….

a. snake b. seeds c . Squirrel d. birds

35. Caracals obtain the energy by eating ………………

a. shark b. grass c. mice d. butterflies

36. Many insects are considered as…………………………

a. producers
b. decomposers
c. primary consumers
d. secondary consumers

37. If all grasses were removed completely from an ecosystem, rabbits in this ecosystem would

a. increase b. decrease c. die d. not be affected

38. …………………..is a community of living organisms, non-living things, and the environment.

a. Habitat b. Ecosystem c. Food web d. Food chain

39. Any food chain starts with ……………………

a. insects b. plants c. fungi d. bacteria

40. Which of the following food chain shows the correct way of energy flow through living organisms.

a. producer → predator → primary consumer

b. predator → producer → secondary consumer

c. producer → primary consumer → predator

41-The predator in a food web usually eats more than one type of …………

a. producer b. consumer c. decomposer d. plant

42. Human is a …………… living organism.

a. producer b. Consumer c. decomposer d. Predator

43. All the following living organisms are decomposers, except……………

a. fungi b. bacteria c. worms d. locusts

44 . Food web shows interaction between ……………….

a. few non-living things b. many non-living things

c. few living organisms d. many living organisms

45. All of the following living organisms are decomposers, except ………….

a. Fungi b. bacteria c. slugs d. hyenas

46. The process which happens to all dead organisms is called …………..

a. photosynthesis b. decomposition c. breathing d. digestion .

47. in a food chain there is a …………………..found between a producers and a secondary consumer.

a. decomposer b. primary consumer c. predator d. tertiary consumer

48. All of the following are affected by water pollution, except ....

a. the soil b. animals

c. the sun c. plants

49.All of the following are top predator, except ....

a. Hawks b. butterflyfish

c. lions c. Tigers

50. The marine food web usually started with ....

a. Clam b. algae

c. zooplankton c. parrotfish

51. When there is a gentle rain in the desert, this ecosystem may be .....

a. Harmed b. destroyed

c. improved c. collapsed

52. Coral reefs are considered as a.............................for many marine organisms.

a. primary consumers. b. secondary consumers,

c. predator. d. shelter

53. If the climate change is suitable, the population of a species ....

a. will die b. will not be affected

c. will increase d. will decrease

54. Seabird build their nest ....

a. on the water surface b. on the mountains cliffs

c. deep down into the sea d. deep down into the river

55. The suitable environment of microorganisms to survive is ....

a. hot water b. warm water

c. cold water d. boiled water

56. All of the following statements are correct <u>except</u>

a.small fish can eat seabirds
b. sharks can eat small fish
c. small fish can't eat seabirds
d. seabirds can't eat sharks

57. When water temperature increases, algae leave tissues of ……………so they become bleached.

a. seabirds
b. coral reefs
c. clam
d. sharks

58. The amount of energy that transfers between living organisms in a food web,

a 10 %
b. 90 %
C. 30 %
d. 100

59. All the following examples represent bad human activities, <u>except</u> …………..

a. Overfishing
b. air pollution
c. floods
d. plastic pollution

60. As a result of coral reefs bleaching, they will be ………..

a. increased
b. enlarged.
c. survived.
d. died.

61. Water can be found in a solid state in the form of ………………..

a. ice
b. steam
c. sea water
d. boiling water

62.An example of gas is ………….

a. Chocolate
b. rock
c. pencil
d. oxygen

63. All of these substances are liquid, except …………….

a. oil
b. milk
c. stone
d. vinegar

64. Both ………….and ……………. have the same state of matter.

a. wood-water
b.plastic- oil
c.wood- milk
d. wood –plastic

65. Matter can be found in ……………….states.

a. 2
b. 3
c. 6
d. 7

66. Bricks are considered ………………………………matter.

a. solid b. liquid c. gas d. plasma

67. We can measure the mass by using ………………….

a. scales b. thermometer c. ruler d. tape

68……………. state(s) can be poured.

a. Solid and liquid c. Gas and liquid

b. Liquid only d. Gas only

69. Liquids have definite …………., but their …………. are not definite.

a. Volume-shape b. Color -volume c. Color-shape d. Shape- volume

70. Both of ……………….and ………………….take the shape of their container.

a. air- plastic b. water--air c. wood-air d. Water-plastic

71. Particles of ………………. are very close to each other.

a. gold b. milk c . Steam d. oxygen

72. To measure the temperature of a table, we can use a ……………….

a. Thermometer b. Measuring tape c. scales d. cylinder

73. By blowing up a balloon,……………………….

a. its volume decreases. b. its volume increases,

c. its color changes d. its mass doesn't change.

74. To examine the structure of tiny particles of a matter, we can use…………….

a. microscopes. b- Balances

c. thermometers d-rulers

75. Particles of……………………..vibrate around their place.

a. glass b- air c. oxygen d- water

76. The model of the Earth shows how much of its surface is covered with ……………….

a. gasoline b. water c. milk d. animals

77. We can see all planets of the …………….. system including the Earth by using a model

a- solar

b digestive

c. respiratory

d. muscular

78. Some liquids come out of a……………… during eruption.

a. star b. wooden piece c. volcano d. plastic piece

79. Particles of …………..are organized and have a regular pattern

a. solids only

b. solids and liquids

c. gases only

d. liquids and gases

80. The amount of space that a matter takes up is called ………….

a. mass b. volume c. area d. weight

81. You can measure the length of your friend by using a ……………

a. thermometer tape measure c. balance d. measuring cup

82. We can differentiate between salt and flour through all of the following properties except

a. shape of particles

c. texture of particles

b. taste

d. color

83. All of the following are physical properties of matter, except …………

a. color b. rusting c. texture d. shape

84. When iron interacts with water and air, it ……………….

a. becomes ash c. becomes powder b. burns d. rusts

85. The volume of 1000 cubic centimeters of liquid is equal the same volume of ………………………

a. 1 Kilogram b.1 gram c. 1 centimeter d. 1 liter

86. All the following properties of matter can be measured by different tools <u>except</u> …………

a. mass b. volume c. color d. temperature.

87. When you put a lighting match close to helium gas, it will ………….

a. burn b. not burn c. form fire c. freeze

88. Steel is used in making hammer because it is ………………….

a. smooth b. flexible c. hard d. transparent

89. Glass is transparent, so it can be used in making ……………….

a. screwdriver b. tires c. eyeglasses c. gloves

90. Blimps are filled with ………………. to rise up in the air.

a. oxygen gas b. helium gas

c. carbon dioxide gas d. atmospheric air

91. Scientist which measure the size and shape of fossils during their research are ……………..

a. Paleontologist c. Cartographers

b. Space scientists d. marine biologist

92. We can use the ……………. to measure the mass of flour before making cake.

a. scales b. thermometer c. ruler d. tape

93. **Cartographers create ……………to help ships find their way through water.**

a. city map b. marine charts c. mountain maps d. desert maps

94. Marine biologist measure different matter in seas and oceans such as the speed of ………………..produced from whales and dolphins.

a. light b. sound c. movement d. wind

95. When ice melts, it turns from ………… state to ……………..

a. liquid - solid b. solid – liquid c. liquid – gas d . solid – gas

96. Matter is…………………………………………….

a. only liquids b. anything that has mass and takes up space

c. only water in different states d. only solids

97. Among chemical changes which is occurred in cooking is ……………..

a. cutting vegetables. b. boiling of water

c. melting of chocolate. d. baking a cake

98. To change water from solid state to liquid and then to gas state, we need to…………the temperature.

a. fix b. increase C. decrease d. reduce

99. Condensation changes the matter from………… state to …State.

a. solid-liquid b. liquid - gas

C. gas- liquid d. liquid- solid

100. When we boil water, it will ……….

a. condense. b. freeze.

C. melt. d. evaporate.

101. To separate sand only from salty water, we can use ………………process.

a. filtration b. evaporation c. freezing d. melting

102. Salt can be separated by …………….. from salty solution .

a. melting b. evaporation c. freezing d. Condensation

103. All matter around us consist of ……………………….

a. Cells b. particles c. nutrients Proteins

104. Matter can be described by ……………………

a. Hardness b. color c. shape d. all of the previous

105. Which change is making a change in matter structure?

a. Physical change b. chemical change

c. shaping c. Melting

106. Among ways of mixture separation is/ are ………………..

a. evaporation only b. Filtration only

c. evaporation and rusting d. evaporation and filtration

107. Burning paper is considered as ………………..change of matter.

a. only chemical b. only physical

b. Both physical and chemical d. neither physical nor chemical

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② Write the scientific term:

1. The process by which plant can make its own food.	(……………………)
2. The gas which is released from plants during photosynthesis.	(……………………)
3. The source of energy that the plant use to make photosynthesis	(……………………)
4. It is the process in which the seed begins to grow.	(……………………)
5. It is very young plant.	(……………………)
6. A part of plant that transports the water and mineral salts from the root to the leaves.	(……………………)

7. A part of plant represents the reproductive organ of the plant	(……………………)
8. Small structures in the plant's roots that increase the absorption of water and nutrients from the soil.	(……………………)
9. A part of the plant that fix it in the soil.	(……………………)
10. A part of the plant that supports its leaves and flowers.	(……………………)
11. The method by which coconut seeds spread	(……………………)
12. The method by which Dandelion seeds spread	(……………………)
13. Blood vessel that transports the blood from heart to all body cells.	(……………………)
14. It is a process through which the nutrients found in dead organisms bodies return back to the ecosystem.	(……………………)
15. The organism that feeds on dead organism bodies	(……………………)
16. They are consumers which feed on secondary consumers.	(……………………)
17. A process in which humans can make new products from waste materials.	(……………………)
18. A model of the whole world that is made in the shape of a large ball	(……………………)
19. A phenomenon that happens to living organisms due to habitat loss	(……………………)
20. A copy that is similar to a real thing which we cannot observe with our eyes.	(……………………)
21. A phenomenon that causes the coral to turn completely white.	(……………………)
22. A human activity that decreases the number of fish in the marine area.	(……………………)
23. An area in the ocean where small of coral reefs are cared for.	(……………………)

24. Pollution occurs due to the throwing of plastic waste in sea water.	(……………………)
25. A state of matter in which matter has a definite shape	(……………………)
26. Anything that has mass and occupies space.	(……………………)
27. The building unit of matter	(……………………)
28. Organisms that return the energy back to the ecosystem	(……………………)
29. A substance with particles that maintain their cohesion.	(……………………)
30. A substance with particles that move at very high speeds.	(……………………)
31. A device that is used to measure the temperature of milk.	(……………………)
32. The number of living organisms of one species	(……………………)
33. The building unit of matter	(……………………)
34. The material that is used to build the roofs of cold weather homes.	(……………………)
35. A material that is used to build the roofs of desert homes	(……………………)
36. It is the amount of space that matter takes up.	(……………………)
37. It is a measure of the amount of matter	(……………………)
38. The ability of material to transfer heat and conduct electricity	(……………………)
39. it is a light gas which used in filling blimps	(……………………)
40. It is a process by which a matter is changed from solid to liquid state	(……………………)
41. They are changes in matter which are usually reversible and don't affect its structure	(……………………)
42. The process of changing matter from solid state to liquid state.	(……………………)
43. The process of changing matter from liquid state to solid state.	(……………………)
44. The process of changing matter from gas to liquid state.	(……………………)
45. The process of changing matter from liquid state to gas state.	(……………………)
46. It is a change in the shape and the size of the matter only without forming new substance.	(……………………)
47. It is a change in the structure of matter and forming new substance	(……………………)

48. It is the substance that consists of more than one matter which don't have any physical or chemical change in their properties	(……………………)
49. . A Matter that is formed when two or more materials comb chemically.	(……………………)
50. They are consumers that exist at the top of food chains	(……………………)
51. The number of living organisms of one species	(……………………)

③ Complete the following:

1. Plants absorb…………and…………..from the soil through their ……………
2. Plants make their own food through process that takes place in their……….
3. The stem carries water and nutrients from……………to………….of the plant.
4. From the plants part …………..,………………..,………………
5. The basic needs of plant to grow are …………..,…………,………….
6. Root absorbs nutrient from the …………
7. The photosynthesis process produces…………..and……….
8. The plant change the ………….. energy into ………………energy stored in the plant's food during the Photosynthesis process.
9. Phloem transport ……………. produced in the leaves to all parts of the plant.
10. Generally, arteries carries blood rich in …………………….
11. ………………Pumps the blood in human body
12. ………………… transport the blood to the heart
13. Seed with a sweet taste like seed on strawberry, are best dispersed by ……………..
14. Fluffy seeds like kapok tree seed dispersed by ……………………….
15. Living organisms include………………, consumers and decomposers.
16. Producers can make sugar which is rich in energy through………… process.
17. Decomposers and…………depend on producers to get their energy.
18. The most common producers are……………………….

19. The light energy of the Sun cannot flow directly to consumers and………….
20. In a food chain, the energy flows from………….consumer to a secondary consumer.
21. The decomposition process done by two types of living organisms, which are ……………………organisms and ……………………..organisms.
22. It's better to …………………… waste material than throwing them in ecosystem.
23. Snail , earth worm, and slugs are considered as ……………………., while vulture, crabs, and cockroaches are considered as ………………………….
24. Primary consumers feed on………………………….
25. The seeds of plants that are scattered by the wind are……………to move for long distances.
26. The ecosystem may ……………., If there is heavy rain in the desert,
27. If drought occurs, and all the grass in the desert dies, so the food web may…….
28. Energy is transferred from……………to producers until reaches to………….process
29. …………………..project is an example of the restoration of natural habitats that take place in the Arabian Gulf.
30. ……............................ is important for the needs of living organisms to survive.
31. ……………phenomenon causes damages coral reefs and causes their extinction.
32. Some matters can be hard, such as………………and some matters are soft, such as………………………..
33. ………………….and .... are both characteristics of matter
34. …. .... matter has definite shape.
35. Water vapour is an example of a………state, while snow is an example of a…..........state
36. Solid particles are linked together by ……………………..attraction force.
37. Liquids and gases both have………………………shapes
38. When ice is melted, it changed from …………….state to ....state.

39. Iron is a ……………. State of matter that has definite ………….and ……….
40. Air is considered as an example of …………….state, because it takes the ………………and …………….of container.
41. When an amount of liquid is heated, the speed of its particles will ………………….
42. . Water can change from the liquid state to ……….state by increasing its temperature.
43. The distance between particles of water is very small in case of its state. ………………..
44. When two substances combine and form a new substance, this new substance is called a ……………………..
45. To separate mud from salty water we can use …………………. process.
46. To separate salt from salty water we can use ……………………. Process.
47. We can separate dusts from water by using ……………process.
48. Cutting a paper into pieces is considered as a………….. change, while burning it is considered as a ……………….. Change.
49. Melting of wax is a………………..change, while burning of wood is a……………….change.

50. You can use a………….to measure the mass of matter, while you can use a……………… to measure its temperature.

51. An area that provides food, water and shelter to all living organisms which live in it, is known as……………………….

④Put (true) or (false)

1. Heavy rain improves the desert ecosystem more than gentle rain.	( )
2. Energy remains in an ecosystem and it's transferred between its components.	( )
3. Overfishing is one of the most natural events that impact the marine ecosystem.	( )

4. Heavy rain in the desert causes the growth of more producers.	( )
5. The number of prey increases when the number of predators decreases.	( )
6. Habitat loss may cause extinction for any species of living organisms	( )
7. Matter exists everywhere around us in nature.	( )
8. Particles in ice move more freely than in water	( )
9. Water always takes the shape of the container	( )
10. Matter consists of tiny moving particles.	( )
11. We can use thermometer to measure the temperature of a hot cup of tea.	( )
12. The first link in any food chain is a consumer.	( )
13. Burning of wood is a physical change.	( )
14. Cutting paper is physical change	( )
15. Liquids don't take the shape of the container that they are placed in.	( )
16. Metal rusts due to chemical changes that occur to the material.	( )
17. Air consists of gaseous mixtures	( )
18. We can separate baking soda from vinegar easily after mixing them together.	( )
19. Melting of ice changes the structure of water	( )
20. The particles of gases spread out and move quickly and randomly.	( )
21. During chemical change, the properties of the matter will be changed	( )
22. The components of mixture combine together.	( )

⑤Correct the underline word:

1. Chlorophyll in plant's **<u>roots</u>** absorbs energy from the sunlight.

2. Coconut seeds disperse by **<u>wind.</u>**

3. **<u>Respiration</u>** process helps the plant to make its own food.

4. Due to rising of water temperature, coral reefs turn completely into **<u>green.</u>**

5. Tree trunks are **<u>climb stems.</u>**

6. There are tiny holes on the **<u>stem</u>** to allow gases passes into the plant

7. Plant's **<u>leaves</u>** help it lo be fixed in the soil.

8. Humans can get their food from **<u>air</u>** and animals.

⑥Give reason:

1- Roots have important role in the photosynthesis process

………………………………………………………………………………………………

2- Photosynthesis process is important for plants to survive

………………………………………………………………………………………………

3- Some plants don't need soil as a basic need

………………………………………………………………………………………………

4- The presence of stomata on the surface of plant's leaves.

………………………………………………………………………………………………

5- Green plants can make their own food

………………………………………………………………………………………………

6- Xylem vessels are important for the plant

………………………………………………………………………………………………

7- There is no life on Earth in the absence of plants.

………………………………………………………………………………………………

Model answers (Grade 5)

1- Choose the correct answer

1.b	**2.d**	**3. c**	**4. b**	**5.b**	**6.c**	**7.c**	**8.c**	**9. b**	**10. c**
11. a	**12. b**	**13. c**	**14. b**	**15. c**	**16.a**	**17.b**	**18.c**	**19.b**	**20. b**
21.c	**22.a**	**23.b**	**24.c**	**25.c**	**26.d**	**27.b**	**28.a**	**29.c**	**30.d**
31.b	**32.a**	**33.c**	**34.b**	**35.c**	**36.b**	**37.c**	**38.b**	**39.b**	**40.c**
41. b	**42. b**	**43. d**	**44. d**	**45. d**	**46. b**	**47. b**	**48. c**	**49. b**	**50. b**
51. c	**52. d**	**53. c**	**54. b**	**55. c**	**56. a**	**57. b**	**58. a**	**59. c**	**60. d**
61. a	**62. d**	**63. c**	**64. d**	**65. b**	**66. a**	**67. a**	**68. b**	**69. a**	**70. b**
71. a	**72. a**	**73. b**	**74. a**	**75. a**	**76. b**	**77. a**	**78. c**	**79. a**	**80. b**
81. b	**82. d**	**83. b**	**84.d**	**85. d**	**86. c**	**87. b**	**88. c**	**89. c**	**90. b**
91. a	**92. a**	**93. b**	**94. b**	**95. b**	**96. b**	**97. d**	**98. b**	**99. c**	**100d**
101.a	**102.b**	**103.b**	**104. d**	**105.b**	**106.d**	**107. a**			

2-write the scientific term:

1. photosynthesis	2. oxygen	3. Light energy	4. Germination
5. seedling	6. xylem	7. flower	8. Root hairs
9. root	10. stem	11. water	12. wind
13. artery	14. decomposition	15. decomposers	16. 3ry consumers
17. recycling	18. globe	19. Extinction	20. Model
21. Coral bleaching	22. overfishing	23. nursery	24. Plastic pollution
25. solid	26. matter	27. particles	28. decomposer
29. solid	30. gas	31. thermometer	32. population
33. particles	34. ceramic	35. strong stone	36. volume
37. mass	38. conductivty	39. helium	40. melting
41. physical change	42.melting	43. freezing	44. condensation
45. evaporation	46. physical change	47. chemical change	48mixture
49. compound	50. top predator	51. population	

③ Complete the following:

1. water and salt , photosynthesis	2. photosynthesis .leaves	3. root , leaves
4. root, stem, leaves	5. sunlight,water,air	6. soil
7. glucose, oxygen	8. light, chemical	9. food,
10.oxygen	11.heart	12.**veins**
13.being eaten	14.wind	15.producer
16.photosynthesis	17.consumer	18.plants
19.decomposers	20.primary	21.scavengers, decomposers
22.recycle	23.decomposers, scavengers	24.producers
25.lightm(fluffy)	26.get harmed	27.get harmed
28.sun, decomposers	29.habitat restoration	30.plants
31.coral bleaching	32.steel, feather	33.color, shape
34.solid	35.gaseous, soild	36.strong
37.indefinite	38.solid, liquid	39.solid
40.gas,shape,volume	41.increase	42.gas
43.ice	44.compound	45.filteration
46.evaporation	47. filteration	48.physical
49.physical, chemical	50.scales, thermometer	51.ecosystem

④ **Put (true) or (false)**

1. false 2. True 3. False 4. False 5. True 6. True 7. True 8. False

9. True 10. True 11. True 12. False 13. False 14. True

15. False 16. True 17. True 18. False 19. False 20. True
21. True 22.false.

⑤Correct the underline word:

1. Leaves 2. Water 3. Photosynthesis 4. White 5. Wood

6. Leaves 7. Root 8. Plans

⑥Give reason:

1. Because roots absorb water and nutrients from the soil
2. Because it helps the plant to make its own food
3. Because some plants can grow on water while others can grow on other plants or rocks
4. To allow gases to move into and out of the plant
5. Because green plants can make photosynthesis process
6. Because they transport water and nutrient from roots to leaves
7. Because plants produce oxygen gas during photosynthesis process which is important for all living organisms to survive
8. Because it absorbs the sunlight and give the leaf its green Color
9. To increase the amount of the absorbed water
10. Because they produce seeds for the plant reproduction
11. Because it transports blood and other fluids through the body

11. Because it carries water and nutrients from roots to leaves in one direction

12. Because seeds can stick to animal fur or being eaten by animals and come out with their stool
13. Because they are light seeds
14. Because they have spines
15. To get energy from food to do his activities
16. Because it is absorbed by plants to make their own food then animals and humans eat these plants
17. Because they cannot make their own food
18. Because they return the nutrients of dead organisms back to the soil
19. Because scavengers break down the dead bodies into smaller pieces
20. Because they will not find food to eat or shelter to live

21. Because sharks feed on fish that depend on algae to get their food
22. Because pollution negatively affects all living organisms in food web.
23. Because fire forests produce smoke that causes difficulty in breathing
24. Because humans feed on fish that depends on algae in coral reefs for food
25. Because when the water temperature rises, the coral reefs get rid of algae from their tissues
26. Because rising temperatures cause coral bleaching while microplastics are toxic and sharp
27. Because restoration projects take a lot of money and a long time
28. Because of eroding of riverbank

30. Because it has mass and volume

31. To protect it from dust and sand

32. Because the gas particles moves very freely and has more energy.

33. Because the particles move freely and slide over each other.

34. Because the particles gain heat energy and move very fast

35. Because it is lighter than air.

36. Because they are bad conductors of heat.

37. Because it is nor poisonous and not flammable

38. Because they are change in the shape of matter only

39. Because they are made of more than one material and don't combine chemically.

40. Because it is change in the structure of matter.

⑦- What happens if…………..?

1. Water and nutrients will not be carried from roots to leaves
2. Plants cannot make photosynthesis process so cannot make their own food

3. Gases cannot move into or out the plant leaves so plants will die
4. plants cannot absorb sunlight and the leaves will be yellow
5. The plant cannot absorb water and nutrients from the soil
6. It cannot make its own food and it will die
7. Plants cannot get energy to grow and survive
8. Human cannot transport blood and other fluids throughout the body
9. Plants cannot produce seeds for reproduction / Plants cannot reproduce
10. The plants cannot make their own food through the photosynthesis process
11. It will move to another ecosystem, or it will die
12. The secondary consumers will move to another ecosystem, or they will die
13. Dead animals will not be decomposed, and their nutrients will not return to the soil
14. The water will be polluted, and the marine organisms will be
15. The water of the lake gets dry due to water evaporation
16. The number of primary consumers increase, and the number of producers decrease negatively affected
17. The desert ecosystem will be improved because rainwater grows plants that the organisms feed on
18. The desert ecosystem will be harmed due to the flooding.
19. The food web in the ecosystem may be destroyed
20. The other organisms in the food web will be harmed as top predators will eat all the organisms**.**
21. The microorganisms will move away to a cooler water and also the fish that feed on microorganisms.
22. Many species in this habitat will be lost because they don't have their needs to survive.
23. The iron nail will be attracted to the magnet but the spoon will not
24. The speed of the particles will increase.
25. The temperature will decrease.
26. All dead body will not decomposed and will cover the earth surface.

Various questions

(1) 1. Coral reefs bleaching,

2. Not healthy,

3. When the water becomes warmer the algae leaves the tissue of coral reefs and it turns into white

(2) 1. Physical 2. Odor 3. Rough 4. Chemical

(3) 1. Liquid 2. Space 3. Solid, gas 4. Particles

(4) Predation – consumer

(5) a. physical b. chemical c. chemical d. physical e. physical f. chemical g. physical h. physical

i. chemical

(6) a. salt in water b. oil-water c. cutting paper d. burring paper

(7) a. E b. B c. secondary consumer

(9) Gaseous state, indefinite shape, indefinite volume, very large distance, not cohesion, moving freely , liquid